THOMSON MULTI MEDIA

Brandt FERGUSON **NORDMENDE** SABA **TELEFUNKEN** **THOMSON**

V21002

SERVICE MANUAL
DOCUMENTATION TECHNIQUE
TECHNISCHE DOKUMENTATION
DOCUMENTAZIONE TECNICA
DOCUMENTACION TECNICA

VIDEO

VIDEORECORDER
R5000-T5000 HI-FI
2. VERSION

THOMSON	TELEFUNKEN	NORDMENDE	SABA
VPH 6600 N	M 9560 SA	V 3450 SV	VR 6081
VPH 6601	M 9560 HIFI		VR 6087/F
VPH 6680	M 9571 HIFI		VR 7081
VPH 6697 SENSAR	M 9680 HIFI		VR 8083H
VPH 6750	T 8006 HIFI		VR 8087
VPH 6751			
VPH 6780			
VPH 6790			

⚠

WARNING : *Before servicing this set read the safety recommendations.*
ATTENTION : *Avant toute intervention sur cet appareil, lire les recommandations de sécurité.*
ACHTUNG : *Bei jedem Eingriff im Gerät, die Sicherheitsvorschriften beachten.*
ATTENZIONE : *Prima di intervenire sull'apparecchio, leggere le norme di sicurezza.*
IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

Code : 350 435 10 - 0997 - 10,4M - R5000-T5000 HI-FI - Print ROSSEELS PRINTING : 01 53 01 11 11

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⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil. Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol ⚠ gekennzeichnet) durch nicht normengerechte Teile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (marcati con il segno ⚠) con componenenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio. In tal caso è "esclusa la responsabilità " del costruttore.

La subtitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

⚠ Do not disconnect modules when they are energized!
Repairs on power supply section are to be carried out only with isolating transformer.

⚠ Ne pas retirer les modules lorsqu' ils sont sous tension.
N'effectuer les travaux de maintenance sur la partie reliée au secteur (Switch Mode) qu'au travers d'un transformateur d'isolement.

⚠ Module nicht bei eingeschaltetem Gerät entfernen !
Servicearbeiten am Netzteil nur unter Verwendung eines Regeltrenntrafos durchführen.

⚠ Non scollegare i moduli quando sono alimentati!
Intraprendere riparazioni sulla sezione alimentatore solo con trasformatore isolante.

⚠ No desconectar los módulos cuando están activados.
Las reparaciones en la sección de alimentación de energía deben ser ejecutadas solamente con un transformador de separación.

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VIDEORECORDER

THOMSON

VPH 6600

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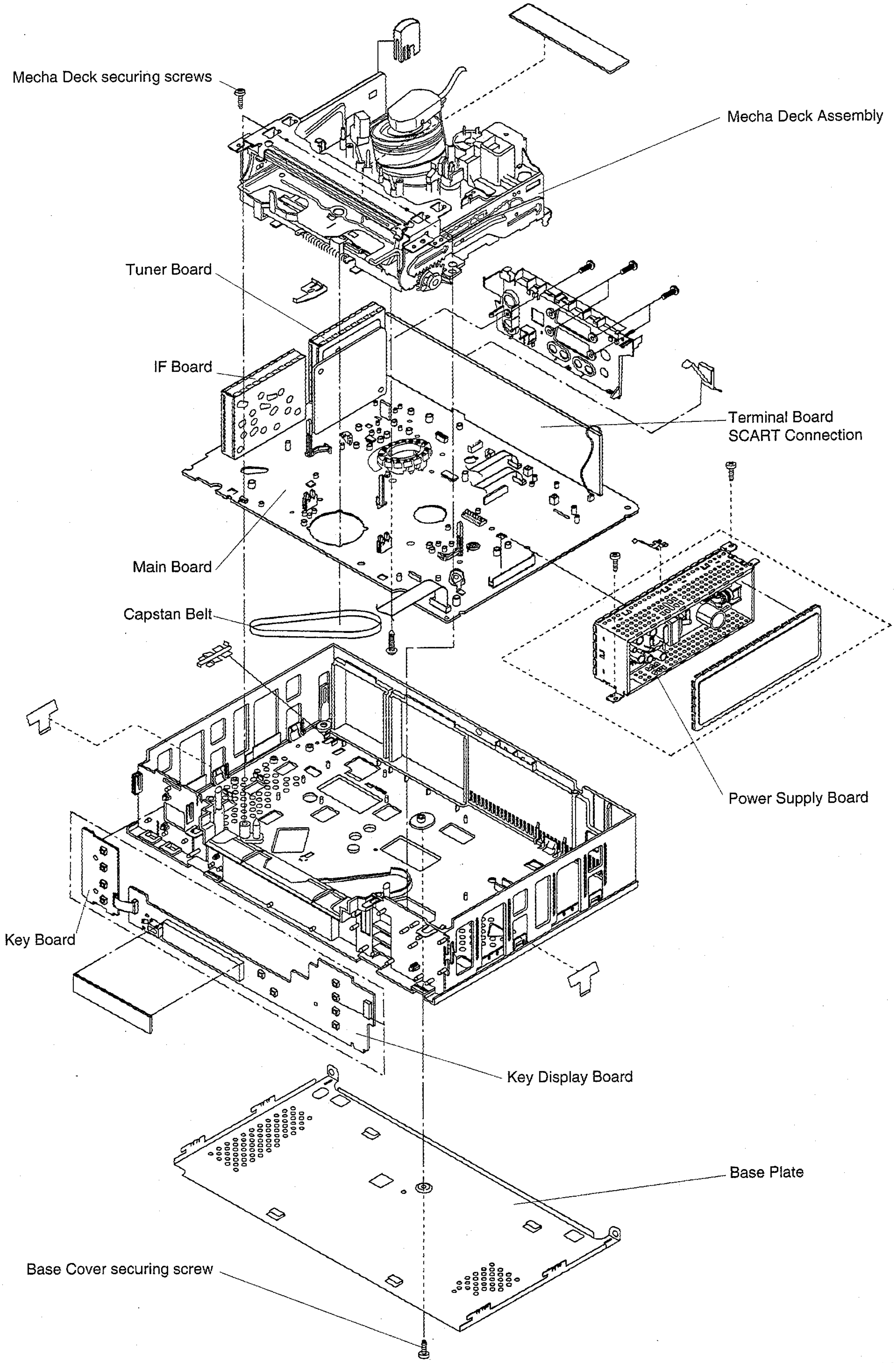
VIDEO RECORDER OVERVIEW - LOCALISATION DES ELEMENTS - EXPLOSIONSZEICHNUNG DES GERÄTES - VISIONE DECOMPOSTA DELL'APPARECCHIO - VISTA AMPLIADA DEL CONJUNTO


Mecha Deck securing screws
Mecha Deck Assembly
Tuner Board
IF Board
Terminal Board
SCART Connection
Main Board
Capstan Belt
Power Supply Board
Key Board
Key Display Board
Base Plate
Base Cover securing screw

1. Service Hinweise

1.1 Demontage des Gerätes

1.1.1 Gehäuse

a) 5 Schrauben an der Rückseite des Gehäuses herausdrehen.
b) Die zwei seitlichen Schrauben herausdrehen
c) Das Gehäuseoberteil leicht nach hinten ziehen und anheben.

1.1.2 Frontblende

a) 2 Schrauben an der Oberseite links und rechts vom Kassettenfach herausdrehen.
b) 2 Kunststoffzungen an der Oberseite anheben.
c) 2 Kunststoffzungen an der Unterkante der Frontblende anheben und die Frontblende abnehmen.
Anmerkung: Während des Wiedereinbaus der Frontblende, muß die Kassettenklappe hinter dem Hebel liegen, auf der rechten Seite des Kassettenschachtes (halten Sie die Kassettenklappe in horizontaler Lage beim Einfügen in die Frontblende).

1.1.3 Bedienteil - Platte (KDB)

a) Ziehen sie die Stecker BK14 und BK06 heraus.
b) 2 Rastnasen an der Oberkante der Bedienteil-Platte anheben und Platte nach vorne/oben herausheben.

1.1.4 Front-Anschlußplatte(nicht bei allen Geräten)

a) Lösen Sie 2 Verriegelungen am oberen Teil der Platte, ziehen Sie die Platte nach vorn/oben, um sie abzunehmen.

1.1.5 Bodenplatte

a) Eine Schraube aus der Bodenplatte entfernen.
b) Lösen Sie Verriegelung in der Mitte der Abschirmung (in der viereckigen Öffnung), drücken Sie die Abschirmung nach hinten, um sie frei zu machen.

1.1.6 Versorgungsteil

a) Entfernen Sie 2 Schrauben .
b) Ziehen Sie die komplette Stomversorgung heraus.

1.1.7 Hauptleiterplatte kpl. mit Laufwerk (Mecha Deck)

a) Die Schraube in der Mitte der Bodenplatte von unten entfernen.
b) Frontblende entfernen und die Steckverbindungen auf der Bedienteil-Platte lösen.
c) 2 Schrauben links und rechts (von oben) des Laufwerks herausdrehen.
d) Lösen Sie 4 Verriegelungen, dabei den hinteren Teil festhalten (Anschluß-Stecker Halterung).
e) Lösen Sie 2 Verriegelungen, die Hauptleiterplatte halten.
f) Machen Sie die Verriegelung hinter dem Gerät los.
g) Ziehen Sie die Gesamt-Einheit (Hauptleiterplatte und Laufwerk) heraus .

1.1.8 Kassettenschacht

Vorher Pkt. 1.1.7 durchführen.
a) 2 Schrauben links und rechts am Kassettenschacht lösen.
b) Den oberen Teil des Kassettenschachtes abheben.
c) Den Kassettenhalter bis zum vorderen Anschlag zurückziehen.
d) Heben Sie den Kassettenschacht auf der Seite der Trommel leicht an.
e) Machen Sie die weißen Hebel frei (links und rechts des Kassettenschachtes) und drücken Sie den Kassettenschacht zur Trommel bis die Führungsblöcke (an der hinteren Seite) aus den Führungsschienen kommen.
f) Ziehen Sie jetzt Sie den Kassettenschacht in der entgegengesetzten Richtung bis die Führungsblöcke (an der Vorderseite) ebenfalls aus den Führungsschienen kommen.

1.1.9 Hauptleiterplatte vom Laufwerk trennen

Vorher Pkt. 1.1.7 durchführen.
a) Steckverbindungen BT002 (am Lademotor), BV001 (Kopftrommel) und BN003 (HIFI) abziehen.
b) Eine, mit einem Pfeil markierte Schraube, von der Lötseite der Hauptplatine herausdrehen.
c) Antriebsriemen entfernen.
d) Leiterplatte entrasten (4 Clips) und abnehmen

1. Service Notes

1.1 Disassembly

1.1.1 Top cover

a) Remove 5 screws from the rear.
b) Pull the top cover slightly backwards and lift.

1.1.2 Front panel

a) Remove two screws on the front left and right side of the cassette housing.
b) Bend the 4 top hooks of the front panel upwards to disengage them from their chassis retainers.
c) Disengage two lower hooks of the front panel and pull the front panel forward and downward to remove.
d) Note: During reinstallation of the front panel, the cassette flap must be positioned behind the lever, on the right-hand side of the cassette holder (hold the flap in a horizontal position while engaging the front panel).

1.1.3 Key Display Board

a) Disconnect connectors BK14 and BK06.
b) Disengage 3 hooks on the upper edge of the KDB and remove the board in a forward and upward direction.

1.1.4 Front connection board (not in all cases)

a) Release the two clips at the upper edge of the board and remove the board in a forward and upward direction.

1.1.5 Bottom cover

a) Take out one screw from the base.
b) Release the clip in the center of the bottom cover (in the square hole), push the cover to the back and lift it.

1.1.6 Power Supply assy.

a) Remove 2 screws.
b) Remove the Power Supply Assy.

1.1.7 Main board assy. with Mecha Deck

a) Remove the centre screw from the base.
b) Remove the front panel and disconnect the cable connections on the key display board.
c) Remove 2 screws on the left and right of the Mechadeck.
d) Release the 4 clips holding the rear section (socket support).
e) Release the 2 clips holding the main deck.
f) Release the clip at the rear left of the device.
g) Remove the Mecha Deck with the main board upwards.

1.1.8 Cassette housing

Before doing this step please do step 1.1.7.
a) Take out two screws at the left and the right side of the upper part of the cassette holder.
b) Remove the upper part of the cassette holder
c) Pull the remaining part to the upper end position.(Eject)
d) Lift the cassette holder at the side, which shows to the drum. Release the white levers (left and right of the cassette holder) and push the cassette holder towards the drum until the guide pins at the rear side come out of the guide rails.
f) Now pull the cassette holder in the opposite direction until the guide pins at the front side also come out of the guide rails.

1.1.9 Separate Main board from Mecha Deck

Before doing this step please do step 1.1.7.
a) Disconnect the cable connection BT002 (function control motor), BV001 (drum motor) and BN003 (HIFI).
b) Take off one screw marked with an arrow from the solder side of the main board.
c) Remove the capstan belt.
d) Release the 4 clips and remove the main board.

1.2 Exchange of the drum unit

Note:
To exchange the upper part of the drum unit, refer to the service manual :

«Drum Disassembly / Assembly «

1.2 Austausch der Kopftrommeleinheit

Anmerkung:
Um den oberen Teil der Trommel auszuwechseln, beziehen Sie sich bitte auf das Handbuch:

«Mechanische Einstellungen R4000»

1.3 Service Einstellungen

1.3.1 Einrichten der Bedienteil-Software

Es ist notwendig den KDB-Prozessor über die bestehende Hardware-Konfiguration zu informieren. Dies wird bereits ab Werk konfiguriert und in den EEPROM abgelegt.

1. Videorecorder vom Netz trennen.
2. Tasten "-" und "+" an der Frontseite gedrückt halten und dabei den Recorder am Netz anschließen.

Für Gerät mit 18 Ziffern:
Auf dem TV-Schirm werden 18 Ziffern angezeigt, die den aktuellen Zustand des Gerätes anzeigen.
Im Display erscheint "SETUP".
In diesem SERVICE EINSTELLUNGS-Modus können gewisse Werte in Funktion spezifischer Charakteristika eingegeben werden. Die 18 Ziffern, die Ihrem Gerät entsprechen finden Sie auf Seite 9. Die jeweils einzustellende Ziffer blinkt auf dem Bildschirm. Die Eingaben werden mit den Zifferntasten auf der Fernbedienung durchgeführt. Nachdem alle 18 Ziffern eingegeben wurden, blinkt die erste Ziffer wieder.
Um die neuen Einstellungen abzuspeichern, drücken Sie bitte die STOP Taste. Sie können den Service Mode auch verlassen, ohne abzuspeichern. Dazu drücken Sie bitte die EXIT Taste auf der Fernbedienung.
Wenn Sie die neuen Werte abgespeichert haben, dauert es einige Sekunden, bis diese in das EEPROM geschrieben sind. Während dieser Zeit bleibt das Display dunkel.

Für Gerät mit 14 Ziffern:
Auf dem TV-Schirm werden 14 Ziffern angezeigt, welche die aktuellen Voreinstellungen angeben.
Die Tasten1, 3, 4, 5, 6, 7, 8, 9, 0 drücken, um den Service-Datenwert von 0 zu F zu erhöhen, und 2 drücken, um zur nächsten Nummer überzugehen.
In diesem Service-Einrichtungsmodus können einige dem Videorecordertyp entsprechende Einstellungen vorgenommen werden. Die Ihrem Gerät entsprechende Nummer aus 14 Ziffern finden Sie in der Tabelle auf Seite 3. Die jeweils einzustellende Ziffer blinkt auf dem Bildschirm. Die Eingabe erfolgt mit den Tasten der Fenbedienung. Nachdem alle 14 Ziffern eigegeben wurden, blinkt wieder die erste Ziffer. Zum Abspeichern der neuen Einstellungen drücken Sie die Taste „STOP“ der Fernbedienung. Sie können den Service-Modus auch ohne Abspeichern verlassen. Zu diesem Zweck drücken Sie die Taste „E“ oder „OFF“ der Fernbedienung.
Wenn Sie die neuen Werte abgespeichert haben, dauert es einige Sekunden, bis diese in das EEPROM geschrieben sind. Während dieser Zeit bleibt die Anzeige dunkel.

Die Taste "Schneller Vorlauf (>>)" dient zur Auswahl der zweiten Seite des Service Modes. Diese Seite enthält die Funktion «Auto Diagnose». Sie finden mehr Details im Paragraph 1.4.

Hinweis:
Nach der Änderung der Einstellungen im Service Mode ist es erforderlich, den Kopftrommel - Umschaltpunkt neu zu setzen.

1.3.2 Kopf-Trommel-Umschaltpunkt

Legen Sie eine schreibgeschützte Meßkasette in das Videogerät. Die Wiedergabe startet automatisch. Wenn «START. E ---» angezeigt wird, drücken Sie die «STATUS»Taste auf der Fernbedienung. Drücken Sie gleichzeitig die Tasten «+»,«-» danach «PLAY ▶ » auf der Frontseite (Halten Sie die drei Tasten fest). Es wird "EINST." angezeigt. Das Videogerät bleibt im Wiedergabebetrieb. Beenden Sie nach eingen Sekunden diese Einstellung durch Drücken von «PLAY ▶ » auf der Frontseite. (Sehen Sie unter § 2.2.4 betr. der elektrischen Einstellungen nach)

1.3 Service Adjustments

1.3.1 KDB Software Set-Up for R5000

It is necessary to inform the KDB processor which hardware configuration is present. This is done in the factory and the selections stored in the EEPROM.
1. Disconnect the VTR from the mains.
2. Hold keys « - » and « +» pressed and connect the VTR to the mains. (For VCR without these keys, use « STOP », « PLAY » and « STANDBY » keys instead). And release « - » and « + » keys.

For models with 18 digits:
On the TV screen 18 digits are shown, representing the actual Setup values.
The display shows «SETUP».
In this SERVICE SET UP mode, some VTR-TYPE specific settings can be done. The number of 18 digits corresponding to your set is given at the page 9. The actual digit for the input is flashing on the screen. The inputs are done by the numeric keys on the remote control. After the input of all 18 digits, the first digit is flashing again. Store the new settings by pressing the STOP key on the remote control. You can also leave the SERVICE SET UP mode without storing the new settings. To do so, please press the EXIT key on the remote control.
If you have decided to store the new settings, it takes some seconds to initialise the EEPROM. During this time the display remains dark.

For models with 14 digits:
On the On Screen Display (OSD) 14 digits are shown, representing the actual Setup values.
Press 1,3,4,5,6,7,8,9,0 to increase service data value from 0 to F and press 2 to go to next number.
In this SERVICE SET UP mode, some VTR-TYPE specific settings can be done. The number of 14 digits corresponding to your set is given in the page 3 table. The actual digit for the input is flashing on the screen. The inputs are done by the keys on the remote control. After the input of all 14 digits, the first digit is flashing again. Store the new settings by pressing the STOP key on the remote control. You can also leave the SERVICE SET UP mode without storing the new settings. To do so, please press the « E » or « OFF » key on the remote control.
If you have decided to store the new settings, it takes some seconds to initialise the EEPROM. During this time the display remains dark.

The key «FAST FORWARD» is used to switch over to the second page of the Service Mode. This page introduces the Auto Diagnostic function. You will find more details of this in Paragraph 1.4.

Important note:
After the modification of the settings in the Service mode, a new adjustment of the HEAD SWITCHING POINT is necessary.

1.3.2 Head switching point

Insert a protected adjustment test cassette into the video recorder. Playback is set automatically. When the display shows PLAY E— press the key "STATUS" on the remote control. After that, press «+», «-» keys and «PLAY»key on the front panel (Hold all three keys pressed).The display indicates ADJ. The VCR will stay in PLAY mode. After a few seconds, stop the adjustment by pressing «PLAY» key on the front panel.
(see point. 2.2.4 of the electrical adjustments)

1.3.3 Sprachumschaltung

Taste "STATUS" der Fernbedienung gedrückt halten, bis die gewünschte Sprache im Display und auf dem Bildschirm erscheint.

1.4 Auto-Diagnose

Wenn ein mechanischer Fehler auftritt oder nach einem Bedienungsfehler, wird eine Zahl von 10 Ziffern, welche die Fehlfunktion darstellt, im EEPROM gespeichert.
Die angezeigte Zahl auf dem Schirm kann durch Vergleich mit der Tabelle auf S.6 hilfreich sein, das aufgetretene Problem zu lösen.

1.4.1 Anzeige einer Fehlermeldung

Die Fehlermeldung kann auf 2 Arten erfolgen:

a) Wenn die Seite «SERVICE EINSTELLUNGEN» auf dem Schirm ist, drücken Sie «<< Schneller Vorlauf «>>» auf der Fernbedienung.

b) Im **STOP oder STANDBY Modus**, wenn keine Anzeige auf dem Schirm ist, drücken Sie mindestens 10 Sekunden auf LÖSCHEN.

1.4.2 Interpretation der Fehlermeldung

Die Bedeutung der verschiedenen Ziffern, welche die Fehlermeldung darstellen, wird in nachstehender Tabelle angegeben.

1.3.3 Language selection

Keep the STATUS key pressed down, to choose the language of the menus on the display and on the TV screen.

1.4 Auto Diagnostic

When a mechanical problem or operating error occurs, a 10-digit number representing the malfunction is stored in the EEPROM memory.
This number is displayed on the screen and, when analysed, assists in finding a solution to the problem.

1.4.1 Error Message Display

The error message can be displayed in two ways:

a) When the «SERVICE SETUP» page is displayed on the screen, press the FAST FORWARD key «>>» of the remote control.

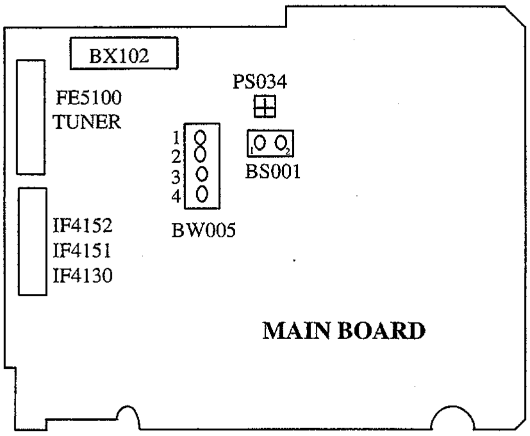
b) In **STOP or STANDBY modes**, when there is no display on the television screen, press the ERASE key, holding for at least 10 seconds.

1.4.2 Interpretation of Error Message

The meaning of the various error message digits is given in the table below.

Number of digit	**Meaning**	**Value**
1 and 2	Target mechadeck and current mechadeck positions	1 - Wind 2 - Stop 3 - Standby 3 - Play 4 - Rev 5 - Loading / Unloading 6 - Off 7 - Eject F - Initial
3 and 4	Task servo is performing	00 - Stop 01 - FRew 02 - FF 04 - Play 11 - Rev 12 - Cue 44 - Record 84 - Still C4 - Rec Pause 40 - Rec / Rec P 10 - Search mode
5,6 and 7,8	Task active prior to abnormal off	bit 0
	Normal	0 0 0 0
	Record	0 0 0 1
	Step	0 0 0 4
	Off	0 0 0 8
	Eject	0 0 1 0
	Stop	0 0 2 0
	Capbrake	0 0 4 0
	Initial	0 0 8 0
	Endless Record	0 2 0 0
	Endless Play	0 4 0 0
	Continuous	0 8 0 0
	Wind	1 0 0 0
	Search	2 0 0 0
	Still	4 0 0 0
	Play	8 0 0 0
9 and 10	Abnormal flags	81 - Drum 82 - Left Reel 84 - Right Reel 88 - Task incomplete

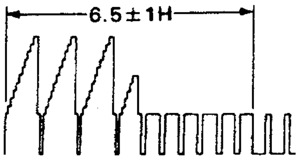
2. ELECTRICAL ADJUSTMENTS - ELEKTRISCHE EINSTELLUNGEN



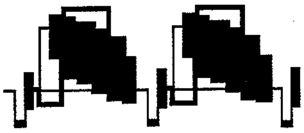
2.2. Measurements Servo Part - Main board
Messungen Servoteil - Hauptleiterplatte

Note: low level < 0.8V; high level > 4.0V

Anmerkung: L-Pegel < 0,8 Volt; H-Pegel > 4,0 Volt

N°	Item Einstellung	Mode & signal Betriebs-art	Test equipment Input signal Meßmittel Eingangssignal	Test point Meßpunkt	Adjustment Point Einstell-Punkt	Description Beschreibung
2.2.1	Oscillator frequency	E.E.	Frequency counter	IT001 (pin 63)	PT001	Adjust for 4 MHz ± 40 Hz
	Oszillator Frequenz	E.E.	Frequenz-zähler	IT001 (pin 63)	PT001	4 MHz ± 40 Hz einstellen
2.2.2	Drum FF (A / V SWP)	REC/PB	Oscilloscope	BW005 / 3	None	Confirm 25 Hz signal
	Kopftrommel-Flip-Flop	REC/PB	Oszilloskop	BW005 / 3	Kein Abgleich	25 Hz Signal überprüfen
2.2.3	Capstan FG frequency	PB / REC (SP)	Frequency counter	IT001 (pin 44)	None	Confirm 757 Hz ± 10 Hz
	Capstan FG Frequenz	PB / REC (SP)	Frequenz-zähler	IT001 (pin 44)	Kein Abgleich	757 Hz ± 10 Hz überprüfen
2.2.4	Head switching point	PB	Dual trace Oscilloscope Trigger ext. BW005/3 (Drum FF)	SCART AV1 (pin 19)	Adjustment by software setup	1. Insert alignment test cassette. 2. When the display shows «PLAY E----» press the STATUS key on remote control. 3. Press «+» , «-» and «PLAY». 4. Display shows «ADJ». 5. Confirm that head switching point is 6.5 H ± 1H before vert. synchro. 6. Stop the adjustment by pressing Play key on the front panel. 
	Kopf-Trommel-Umschaltpunkt	PB	Zweistrahl-Oszilloskop; Externer Triggerpkt. BW005/3 (Drum FF)	SCART AV1 (pin 19)	Software-Einstellung	1. Geschützte Meßkassette einlegen 2. Taste "STATUS" auf Fernbedienung drücken, sobald Display "PLAY E---" anzeigt. 3. Tasten "+" und "-" gedrückt halten und zusätzlich Taste "PLAY ▶ " drücken. 4. Display zeigt "ADJ". 5. Prüfen, ob Kopfumschaltpunkt 6,5 H ±1 H vor dem Vertikal-Synchronimpuls liegt. 6. Beenden Sie die Einstellung durch Drücken der Taste "PLAY ▶ " des Videorecorders.

2.3. Video signal processing (Main board)
Video signalteil (Hauptleiterplatte)

N°	Item Einstellung	Mode & signal Betriebs-art	Test equipment Input signal Meßmittel Eingangssignal	Test point Meßpunkt	Adjustment Point Einstell-Punkt	Description Beschreibung
2.3.1	EE Level	EE Colour bar 1Vpp (AV1 pin20)	Oscilloscope	AV1 pin 19 (without load)	None	Check for 2.0Vpp±0.1Vpp
	E-E - Pegel	E-E Farb-balken, (AV1 pin20)	Oszilloskop	Anschluß 19 von AV1 ohne Scartstecker	Kein Abgleich	 2.0 Vss ±0,1 Vss messen
2.3..2	FM REC level	REC without signal	Oscilloscope	TV200 (emitter)	None	Check for 800mVpp
	FM-Aufnahme-Pegel	REC ohne Signal	Oszilloskop	TV200 (Emitter)	Kein Abgleich	800 mVss überprüfen
2.3.3	PAL chroma REC level	REC PAL colour bar 1Vpp AV1 pin20	Oscilloscope	IV001 (pin 38)	None	Check for 200mVpp±10% burst amplitude
	PAL Farbaufnahme-Pegel	REC PAL Farb-balken 1Vpp AV1 pin20	Oszilloskop	IV001 (pin 38)	Kein Abgleich	200 mVss ±10 % Burstamplitude überprüfen
2.3.4 (Not for all sets)	SECAM Anti Bell filter (1.0715 MHz)	REC SECAM colour bar 1Vpp AV1 pin20	Oscilloscope	IC100 (pin 28)	PC103	Adjust such that the magenta bar in R-Y and B-Y have the same amplitude
Nur für Multi-standard-geräte	Anti Bell Filter SECAM (1.0715 MHz)	REC SECAM Farb-balken 1Vpp AV1 pin20	Oszilloskop	IC100 (pin 28)	PC103	So einstellen, dass die Magentabalken in R-Y und B-Y dieselbe Amplitude haben
2.3.5 (Not for all sets)	SECAM Bell filter (4.286 MHz)	REC SECAM coul. 1Vpp (AV1 pin20)	Oscilloscope	IC100 (pin 26)	PC104	Adjust such that the magenta bar in R-Y and B-Y have the same amplitude
Nur für Multi-standard-geräte	Bell Filter SECAM (4.286 MHz)	Farb-balken 1V ss an AV1 pin 20	Oszilloskop coul. 1Vpp	IC100 (br 26)	PC104	So einstellen, daß die Magentabalken in R-Y und B-Y dieselbe Amplitude haben
2.3.6 (Not for all sets)	SECAM chroma REC level	REC SECAM colour bar 1Vpp AV1 pin20	Oscilloscope	IC100 (pin 28)	None	Check for 100mVpp±10% magenta bar amplitude
Nur für Multi-standard-geräte	SECAM Farbaufnahme-Pegel	REC SECAM Farb-balken 1V ss AV1 pin20	Oszilloskop	IC100 (pin 28)	Kein Abgleich	Magenta Farbbalken auf eine Amplitude von 100 mVss ±10 % überprüfen

2.4. On screen display (Main board)
OSD - Hauptleiterplatte

N°	Item Einstellung	Mode & signal Betriebs-art	Test equipment Input signal Meßmittel Eingangssignal	Test point Meßpunkt	Adjustment Point Einstell-Punkt	Description Beschreibung
2.4.1	OSD chroma oscillator		Frequency counter	Via 4k7 to IT001 (pin78)	None	Confirm 17.734475MHz±500Hz
	OSD Chroma-Oscillator		Frequenzzähler	pin78 IT001 über 4k7	Kein Abgleich	Überprüfen der 17,734475 MHz ± 500 Hz .

2.5. Audio signal processing (Main board) - Audio Signalverarbeitung-Hauptleiterplatte

N°	Item Einstellung	Mode & signal Betriebs-art	Test equipment Input signal Meßmittel Eingangssignal	Test point Meßpunkt	Adjustment Point Einstell-Punkt	Description Beschreibung
2.5.1	Bias oscillator frequency	REC (without signal)	frequency counter (high impedance probe)	BS031 / 1	None	Check for 70 kHz ±7 kHz
	Löschoszillator Frequenz	REC (ohne Signal)	Frequenzzähler über 10:1 Tastkopf	BS031 / 1	Kein Abgleich	Prüfen, f = 70 kHz ±7 kHz
2.5.2	Bias level adjustment	REC (without signal)	Oscilloscope	BS031 / 3		Adjust for V = 70Vpp ±10V
					PS034	other way
			Millivoltmeter	BS001 1-2		Adjust for V = 3mV ± 0.1mV
	Vormagne-tisierungs-Einstellung	REC (ohne Signal)	Oszilloskop	BS031 / 3		Auf V = 70Vss ±10V einstellen
					PS034	andere Methode
			Milli-Voltmeter	BS001 1-2		Auf V = 3mV ± 0,1mV einstellen

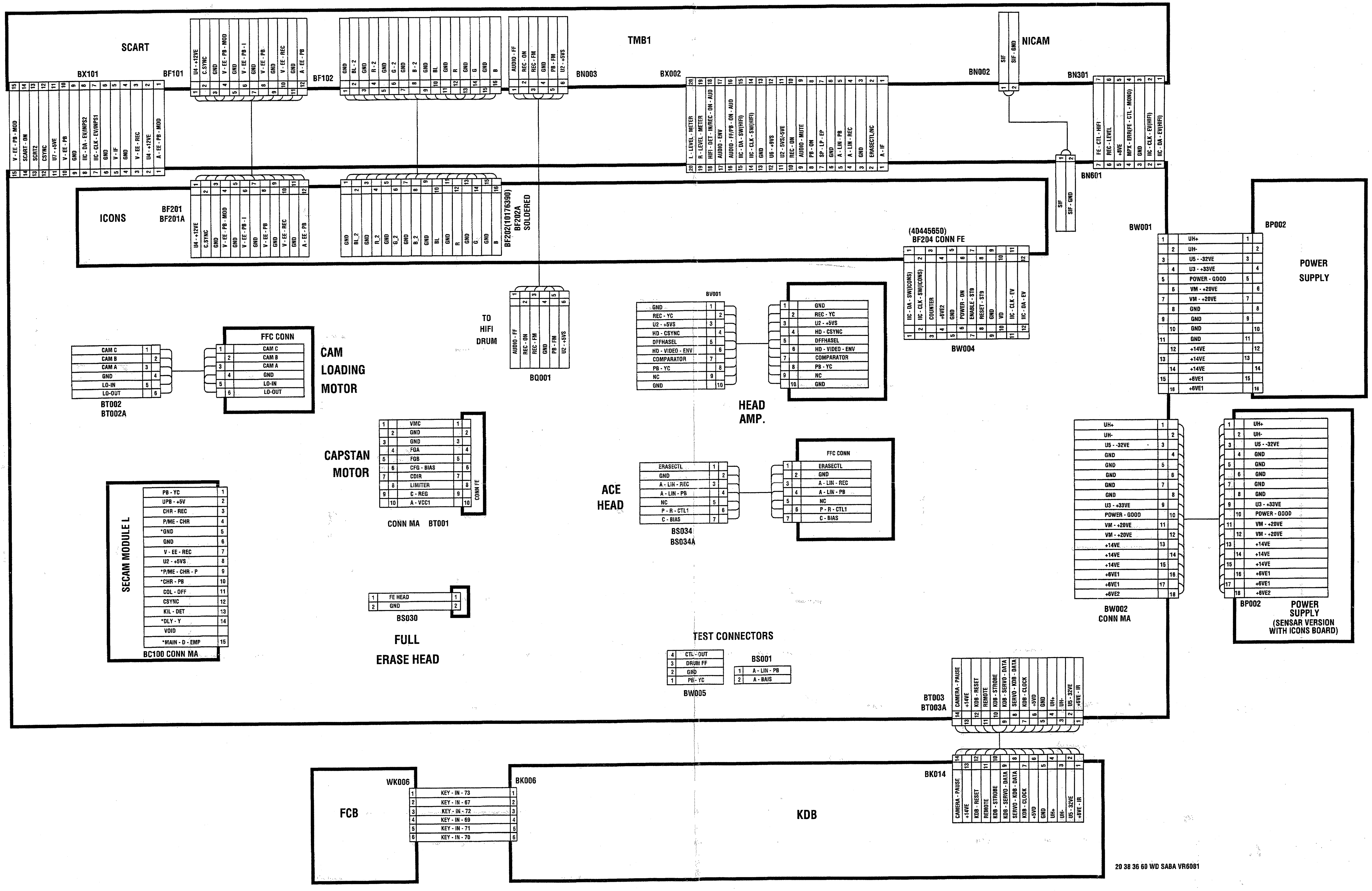
SERVICE SETUP VALUES - VALEURS DU SETUP (MODE SERVICE) - SERVICE MODE EINSTELLUNGEN - VALORI SERVICE SETUP - VALORES DE CONFIGURACION DEL MODO SERVICIO

MODEL	SERVICE SETUP VALUE																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VPH 6600 N	0	0	0	2	2	0	1	9	6	0	0	9	1	1	2	4	1	4
VPH 6601	5	1	0	8	2	2	2	3	2	3	0	3	0	3	2	4	1	0
VPH 6680	0	0	0	2	5	0	3	1	6	7	1	5	1	1	2	4	1	5
VPH 6697SENSAR	7	2	0	9	1	1	3	1	2	7	0	7	1	1	3	4	1	0
VPH 6750	0	1	1	0	9	E	4	C	3	0	9	9	8	A				
VPH 6751	0	1	0	8	2	2	1	9	2	4	0	1	1	1	3	5	1	0
VPH 6780	0	0	0	2	5	0	3	1	6	7	1	5	1	1	3	5	1	5
VPH 6790	0	0	0	3	5	0	3	1	6	7	0	7	1	1	7	5	1	5
T 8006 HIFI	5	1	0	8	1	2	1	9	2	0	0	1	0	9	0	4	0	0
M 9560 HIFI	4	1	0	8	2	2	1	9	2	0	0	9	0	3	2	4	1	0
M 9560 SA	4	2	0	9	2	1	2	3	2	3	0	3	0	3	2	4	1	0
M 9571 HIFI	4	1	0	2	2	2	3	1	6	7	1	5	0	3	7	6	1	0
M 9680 HIFI	4	0	0	2	2	2	3	1	6	7	1	5	1	1	2	4	1	5
V 3450 SV	5	1	0	8	2	2	2	3	2	3	0	1	0	3	2	4	1	0
VR 6081	5	1	0	8	2	2	1	9	2	0	0	1	0	3	2	4	0	3
VR 6087 / F	5	0	0	1	2	0	2	3	6	3	0	1	0	3	2	4	0	3
VR 7081	5	1	0	8	2	2	1	9	2	0	0	1	1	1	2	4	1	0
VR 8083 H	0	1	0	8	2	2	1	9	6	0	0	1	1	1	3	4	1	0
VR 8087	0	1	1	0	9	E	0	C	3	0	9	9	8	A				

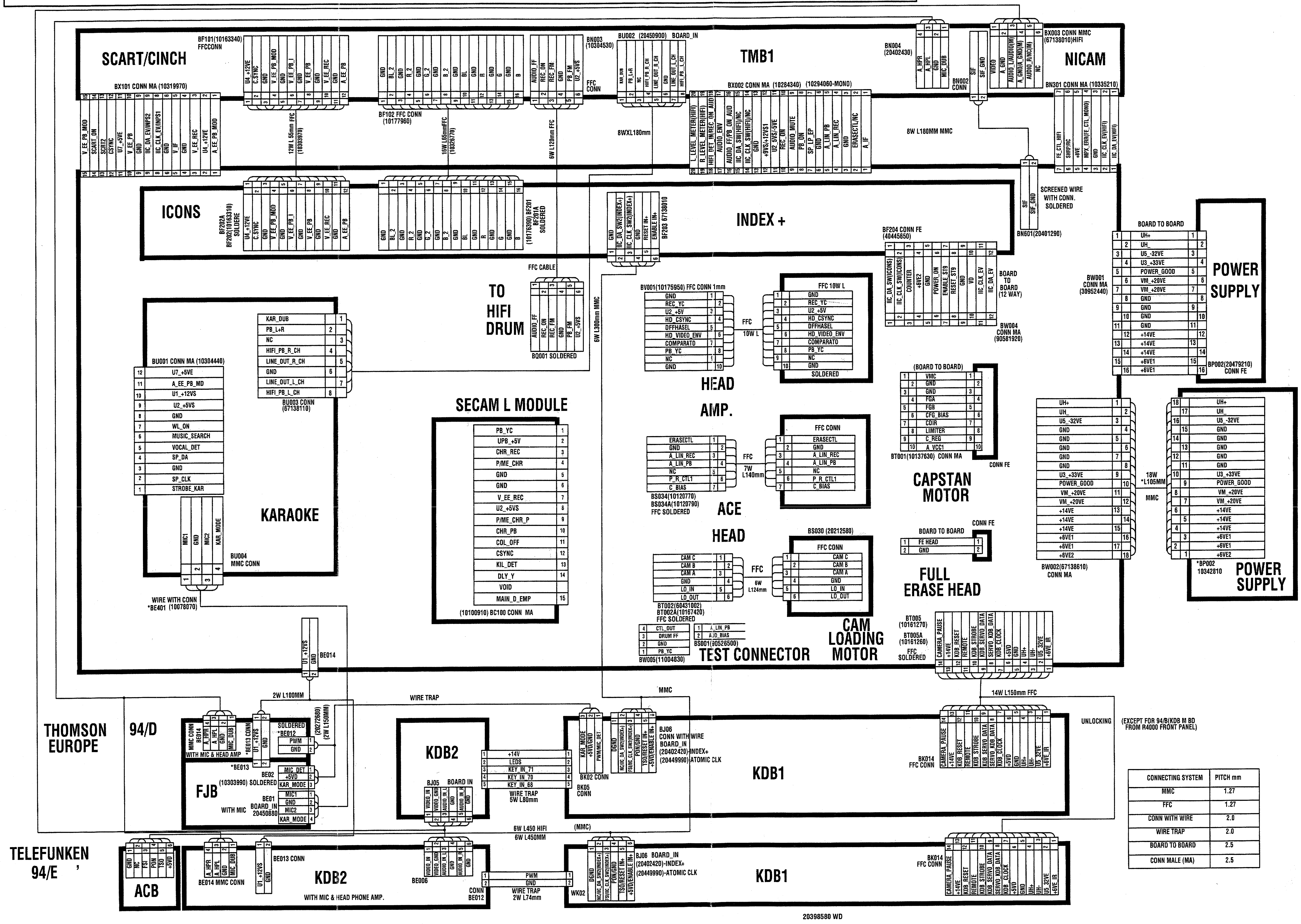
Abbreviations / Abreviations / Abkürzungen

AC	Alternating Current
ACC	Automatic Color Control
ACK	Automatic Color Killer
AD.REF	Analog/Digital Converter Reference
AE	Audio Erase
AFC	Automatic Frequency Control
AGC	Automatic Gain Control
A_IF	Audio IF
ALC	Automatic Level Control
AMP	Amplifier
APC	Automatic Phase Control
AP.CONT	Aperture Control
AV	Audio-Video
A/V SWP	Audio/Video Switching Point (DRUM FF)
B.EMPH	Burst Emphasis
B.DEEMPH	Burst Deemphasis
BG	Burst Gate
BID	Burst Identification
BLK	Blanking
BPF	Band Pass Filter
CAP	Capstan
CBC	Cable Box Control (Satellite Control)
CCD	Charge Coupled Device
CH	Channel
CFG	Capstan Frequency Generator
CLK	Clock
COMP	Comparator
CONV	Converter
CPWM	Capstan Pulse Width Modulation
C-REG	Capstan Regulation
CR	Color Rotary
CS	Chip Select
CSYNC	Composite Synch
CTL	Control
DC	Direct Current
D.LIM	Double Limitter
DEEMPH	Deemphasis
DET	Detector
D-FG	Drum Frequency Generator
DFF	Drum Flip Flop
DIF.EQ	Differential Equalizer
DIG	Digital
DLY	Delay
DOC	Drop Out Compensation
E-E	Electronic-Electronic
EMPH	Emphasis
ENV	Envelope
EP	Extended Play
EQ	Equalizer
F.E	Full Erase
F.REW	Fast Rewind
F.FWD	Fast Forward
F/R	Forward/Rewind
FCB	Front Connection Board
FF	Fast Forward
FG	Frequency Generator
FMCI	FM Carrier Interleave
FWD	Forward
GND	Ground
GCA	Gain Controlled Amplifier
HASEL	Head Amplifier Select
HAB	Head Amplifier Board
HD	Horizontal Synch Pulse
HPF	High Pass Filter
I.R	Infra Red
ID	Identification
INP/IN	Input
KDB	Key Display Board
LIM	Limitter
LP	Long Play
LPF	Low Pass Filter
MESECAM	Middle East Secam
NC	Noise Canceller
OSD	On Screen Display
PB	Play Back
PB_C	Play Back Chroma
PCB	Printed Circuit Board
PDC	Program Delivery Control
PG	Pulse Generator
PH	Pseudo Horizontal Synch
PIF	Picture IF
PLL	Phase Locked Loop
PS	Phase Switch
PV	Pseudo Vertical Synch
PWM	Pulse Width Modulation
REC	Record
REC_C	Record Chroma
REW	Rewind
REV	Reverse
SCL	Serial Clock
SDA	Serial Data
SEC	SECAM
SU REEL	Supply Reel
SMPS	Switch Mode Power Supply
SP	Standard Play
SS	Synch Separator
SW	Switch
TU REEL	Take Up Reel
TMB	Terminal Board
VAL	Components without value and not on the PCB
VCA	Voltage Controlled Amplifier
VCO	Voltage Controlled Oscillator
VCR	Video Cassette Recorder
VD	Supply Voltage Digital
VE	Voltage (Ever)
V_ENV	Video Envelope
V_IF	Video IF
VS	Voltage (Switched)
VM	Motor Voltage (Drum & Loading motor)
VMC	Motor Voltage (Capstan motor)
VPS	Video Program System
W/D	White/Dark
Y/C	Luminance/Chrominance

WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES (VR 6081 - VR 6087/F)

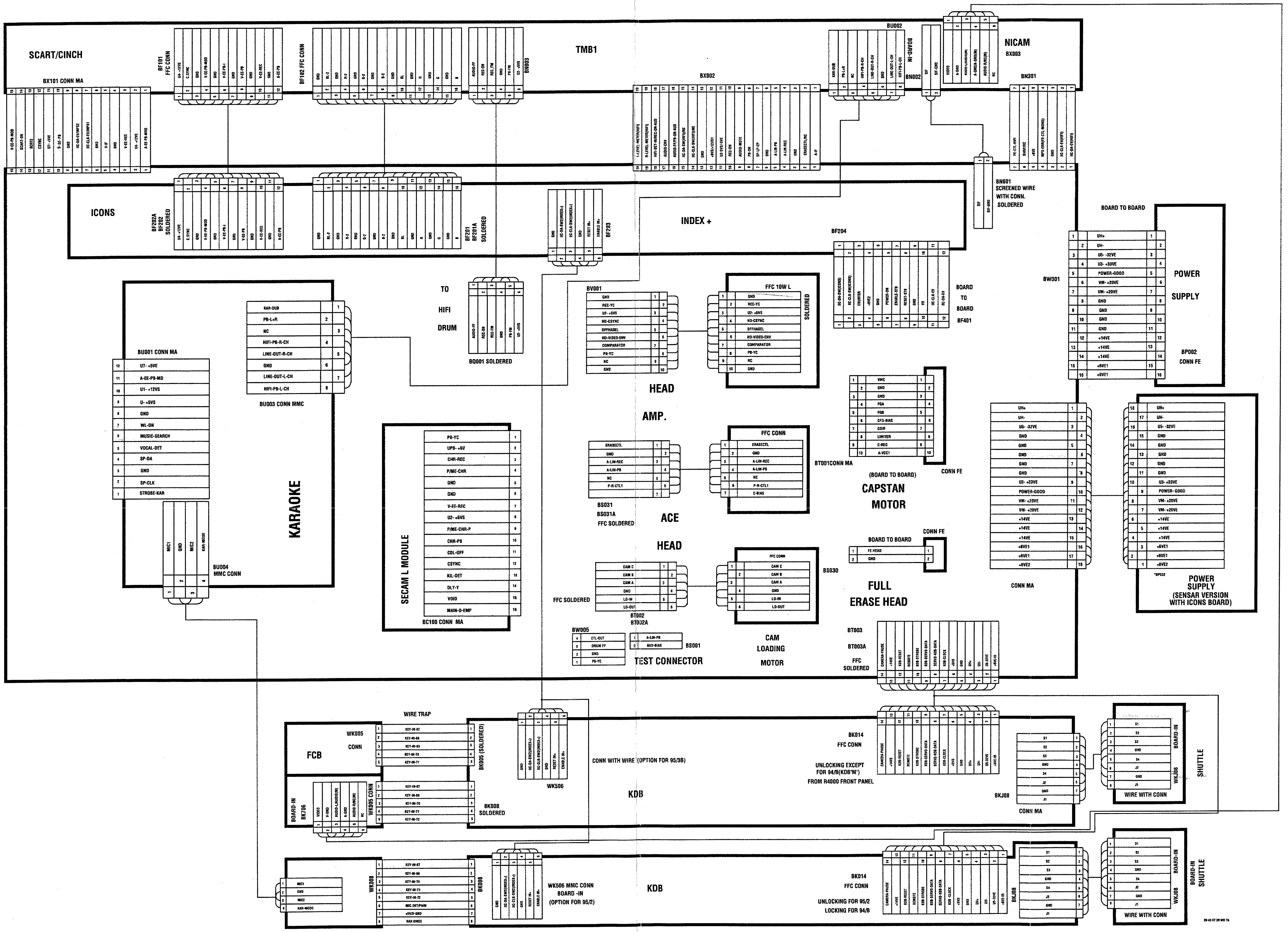

SCART
BX101
V - EE - PB - MOD
SCART - ON
SCRT2
CSYNC
U7 - +5VE
V - EE - PB
GND
IIC - DA - EV/INPS2
IIC - CLK - EV/INPS1
GND
V - IF
GND
V - EE - REC
U4 - +12VE
A - EE - PB - MOD
BF101
U4 - +12VE
C.SYNC
GND
V - EE - PB - MOD
GND
V - EE - PB - I
GND
V - EE - PB
GND
V - EE - REC
GND
A - EE - PB
BF102
GND
BL - 2
GND
R - 2
GND
G - 2
GND
B - 2
GND
BL
GND
R
GND
G
GND
B
AUDIO - FF
REC - ON
REC - FM
GND
PB - FM
U2 - +5VS
BN003
TMB1
BX002
L - LEVEL - METER
R - LEVEL - METER
HIFI - DET - IN/REC - ON - AUD
AUDIO - ENV
AUDIO - FF/PB - ON - AUD
IIC - DA - SW(HIFI)
IIC - CLK - SW(HIFI)
GND
U6 - +9VS
U2 - 5VS/-5VE
REC - ON
AUDIO - MUTE
PB - ON
SP - LP - EP
GND
A - LIN - PB
A - LIN - REC
GND
ERASECTL/NC
A - IF
NICAM
SIF
SIF - GND
BN002
BN301
FE - CTL - HIFI
REC - LEVEL
+8VE
MPX - ERR(FE - CTL - MONO)
GND
IIC - CLK - EV(HIFI)
IIC - DA - EV(HIFI)
BN601
ICONS
BF201
BF201A
U4 - +12VE
C.SYNC
GND
V - EE - PB - MOD
GND
V - EE - PB - I
GND
V - EE - PB
GND
V - EE - REC
GND
A - EE - PB
GND
BL_2
GND
R_2
GND
G_2
GND
B_2
GND
BL
GND
R
GND
G
GND
B
BF202(10176390)
BF202A
SOLDERED
(40445650)
BF204 CONN FE
IIC - DA - SW(ICONS)
IIC - CLK - SW(ICONS)
COUNTER
+6VE2
GND
POWER - ON
ENABLE - ST9
RESET - ST9
GND
VD
IIC - CLK - EV
IIC - DA - EV
BW004
TO
HIFI
DRUM
AUDIO - FF
REC - ON
REC - FM
GND
PB - FM
U2 - +5VS
BQ001
BV001
GND
REC - YC
U2 - +5VS
HD - CSYNC
DFFHASEL
HD - VIDEO - ENV
COMPARATOR
PB - YC
NC
GND
HEAD
AMP.
CAM C
CAM B
CAM A
GND
LO-IN
LO-OUT
BT002
BT002A
FFC CONN
CAM
LOADING
MOTOR
CAPSTAN
MOTOR
VMC
GND
GND
FGA
FGB
CFG - BIAS
CDIR
LIMITER
C - REG
A - VCC1
CONN FE
CONN MA
BT001
ACE
HEAD
ERASECTL
GND
A - LIN - REC
A - LIN - PB
NC
P - R - CTL1
C - BIAS
BS034
BS034A
FFC CONN
SECAM MODULE L
PB - YC
UPB - +5V
CHR - REC
P/ME - CHR
*GND
GND
V - EE - REC
U2 - +5VS
*P/ME - CHR - P
*CHR - PB
COL - OFF
CSYNC
KIL - DET
*DLY - Y
VOID
*MAIN - D - EMP
BC100 CONN MA
FE HEAD
GND
BS030
FULL
ERASE HEAD
BW001
BP002
UH+
UH-
U5 - -32VE
U3 - +33VE
POWER - GOOD
VM - +20VE
GND
+14VE
+6VE1
POWER
SUPPLY
+6VE2
BW002
CONN MA
BP002
POWER
SUPPLY
(SENSAR VERSION
WITH ICONS BOARD)
TEST CONNECTORS
CTL - OUT
DRUM FF
GND
PB - YC
BW005
BS001
A - LIN - PB
A - BAIS
BT003
BT003A
CAMERA - PAUSE
+14VE
KDB - RESET
REMOTE
KDB - STROBE
KDB - SERVO - DATA
SERVO - KDB - DATA
KDB - CLOCK
+5VD
GND
UH+
UH-
U5 - 32VE
+6VE - IR
BK014
FCB
WK006
KEY - IN - 73
KEY - IN - 67
KEY - IN - 72
KEY - IN - 69
KEY - IN - 71
KEY - IN - 70
BK006
KDB
20 38 36 60 WD SABA VR6081

WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES (M9571 HIFI - VR 8087 - VPH 6680 - VPH 6751)


SCART/CINCH
BF101(10163340) FFCCONN
BX101 CONN MA (10319970)
TMB1
BU002 (20450900) BOARD_IN
BN003 (10304530)
FFC CONN
BX002 CONN MA (10284340) (10294060-MONO)
BN004 (20402430)
BN002 CONN
NICAM
BX003 CONN MMC (67138010)HIFI
BN301 CONN MA (10335210)
BF102 FFC CONN (10177960)
12W L 55mm FFC (10303970)
16W L55mmFFC (10326770)
6W L120mm FFC
8WXL180mm
8W L180MM MMC
ICONS
BF202A BF202(10163310) SOLDERE
(10176390) BF201 BF201A SOLDERED
BF203 67138010
INDEX +
BF204 CONN FE (40445650)
SCREENED WIRE WITH CONN. SOLDERED
BN601(20401290)
FFC CABLE
TO HIFI DRUM
BQ001 SOLDERED
6W L300mm MMC
BV001(10175950) FFC CONN 1mm
FFC 10W L
HEAD AMP.
BOARD TO BOARD (12 WAY)
BW004 CONN MA (90581920)
BOARD TO BOARD
BW001 CONN MA (30952440)
POWER SUPPLY
BP002(20479210) CONN FE
KARAOKE
BU001 CONN MA (10304440)
BU003 CONN (67138110)
BU004 MMC CONN
WIRE WITH CONN *BE401 (10078070)
SECAM L MODULE
(10100910) BC100 CONN MA
(BOARD TO BOARD)
BT001(10137630) CONN MA
CONN FE
CAPSTAN MOTOR
FFC CONN
FFC 7W L140mm
BS034(10120770) BS034A(10120790) FFC SOLDERED
ACE HEAD
18W *L105MM MMC
BW002(67138610) CONN MA
*BP002 10342810
POWER SUPPLY
BS030 (20212580)
FFC 6W L124mm
BT002(60431002) BT002A(10167420) FFC SOLDERED
CAM LOADING MOTOR
BOARD TO BOARD
CONN FE
FULL ERASE HEAD
BS001(90526500)
BW005(11004830)
TEST CONNECTOR
BT005 (10161270) BT005A (10161260) FFC SOLDERED
BE014
2W L100MM
WIRE TRAP
MMC
14W L150mm FFC
THOMSON EUROPE
94/D
MMC CONN BE014
WITH MIC & HEAD AMP
*BE013 CONN
SOLDERED *BE012
(20272680) (2W L150MM)
*BE013
FJB
BE02 (10303990) SOLDERED
BE01 BOARD_IN 20450880
WITH MIC
KDB2
BJ05 BOARD IN
WIRE TRAP 5W L80mm
BK02 CONN
BK05 CONN
BJ06 CONN WITH WIRE BOARD_IN (20402420)-INDEX+ (20449990)-ATOMIC CLK
KDB1
BK014 FFC CONN
UNLOCKING
(EXCEPT FOR 94/B(KDB M BD FROM R4000 FRONT PANEL)
6W L450 HIFI 6W L450MM
(MMC)
TELEFUNKEN 94/E
ACB
BE014 MMC CONN
BE013 CONN
KDB2
WITH MIC & HEAD PHONE AMP.
BE006
CONN BE012
WIRE TRAP 2W L74mm
WK02
BJ06 BOARD_IN (20402420)-INDEX+ (20449990)-ATOMIC CLK
KDB1
BK014 FFC CONN
20398580 WD

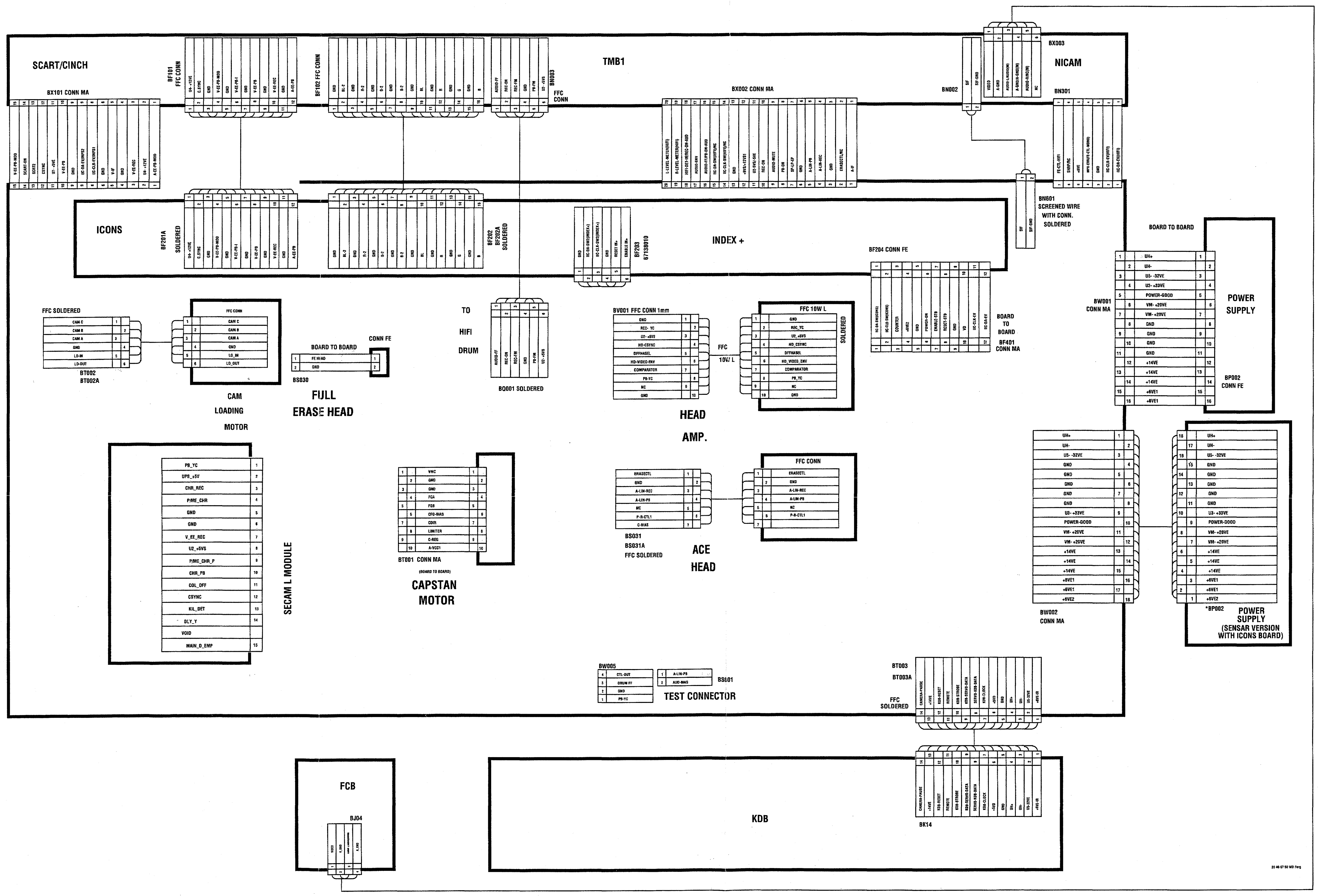
CONNECTING SYSTEM	PITCH mm
MMC	1.27
FFC	1.27
CONN WITH WIRE	2.0
WIRE TRAP	2.0
BOARD TO BOARD	2.5
CONN MALE (MA)	2.5

WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES (VPH 6601 - VPH 6697 SENSAR - VR 7081)

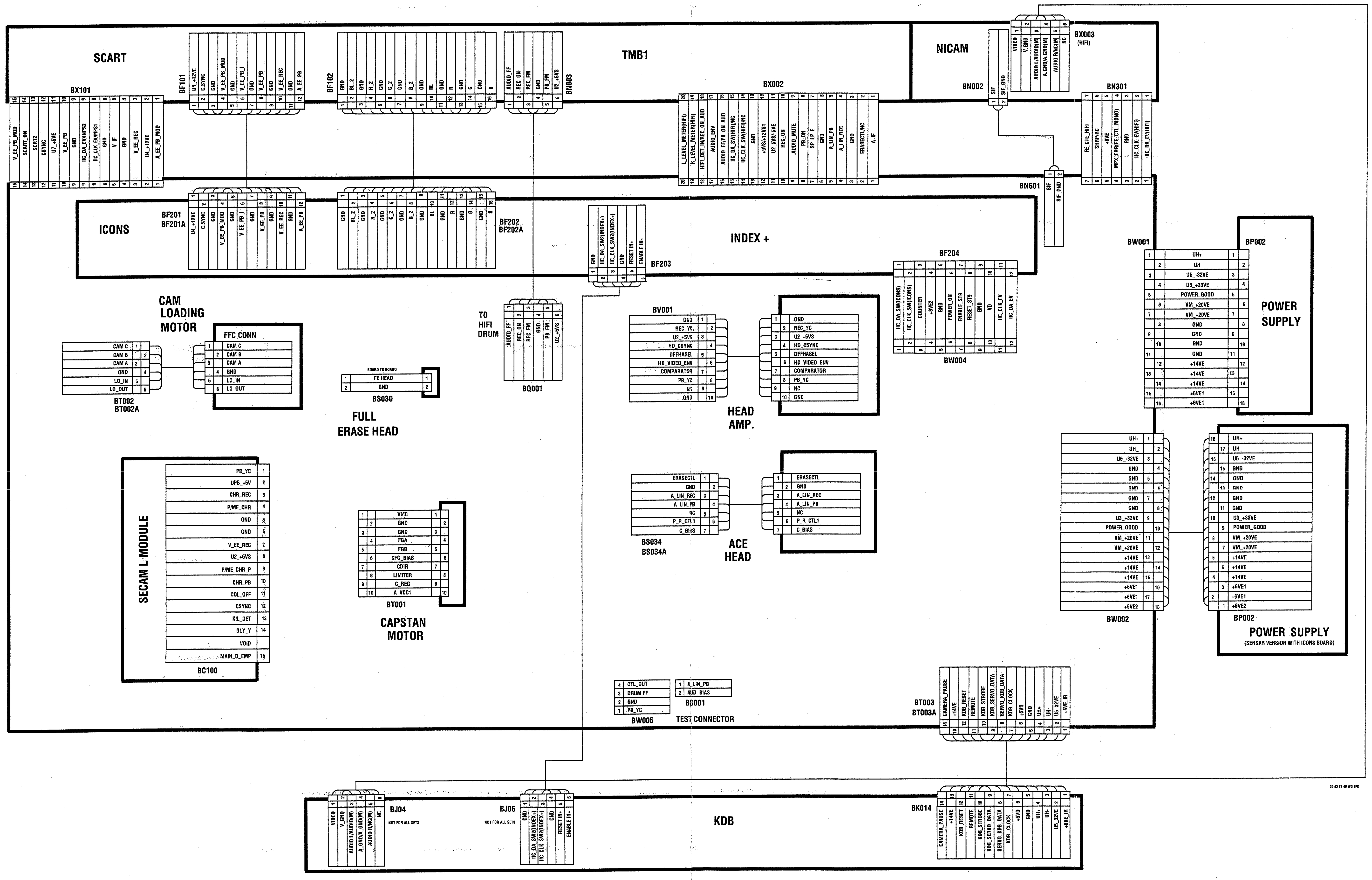

SCART/CINCH
BX101 CONN MA
BF101 FFC CONN
BF102 FFC CONN
BH003
TMB1
BX002
BU002
BOARD-IN
BN002
NICAM
BX003
BN301
BN601 SCREENED WIRE WITH CONN. SOLDERED
ICONS
BF202A BF202 SOLDERED
BF201 BF201A SOLDERED
BF203
INDEX +
BF204
BOARD TO BOARD BF401
BOARD TO BOARD
BW001
POWER SUPPLY
BP002 CONN FE
TO HIFI DRUM
BQ001 SOLDERED
BU001 CONN MA
BU003 CONN MMC
KARAOKE
BU004 MMC CONN
SECAM L MODULE
BC100 CONN MA
BV001
FFC 10W L
SOLDERED
HEAD AMP.
BT001CONN MA
(BOARD TO BOARD)
CONN FE
CAPSTAN MOTOR
BS031 BS031A FFC SOLDERED
ACE HEAD
FFC CONN
BOARD TO BOARD
CONN FE
FULL ERASE HEAD
FFC SOLDERED
BT002 BT002A
BS030
CAM LOADING MOTOR
BW005
BS001
TEST CONNECTOR
BT003 BT003A FFC SOLDERED
CONN MA
POWER SUPPLY (SENSAR VERSION WITH ICONS BOARD)
WIRE TRAP
WK005 CONN
FCB
BK005 (SOLDERED)
CONN WITH WIRE (OPTION FOR 95/38)
WK506
KDB
BK014 FFC CONN
UNLOCKING EXCEPT FOR 94/B(KDB'M')
FROM R4000 FRONT PANEL
BKJ08
CONN MA
BOARD-IN SHUTTLE
WKJ08
WIRE WITH CONN
BOARD-IN BK706
WK005 CONN
BK008 SOLDERED
WK008
BK008
WK506 MMC CONN BOARD -IN (OPTION FOR 95/2)
KDB
BK014 FFC CONN
UNLOCKING FOR 95/2 LOCKING FOR 94/B
BKJ08
WKJ08
BOARD-IN SHUTTLE
WIRE WITH CONN

Updated 09 / 97

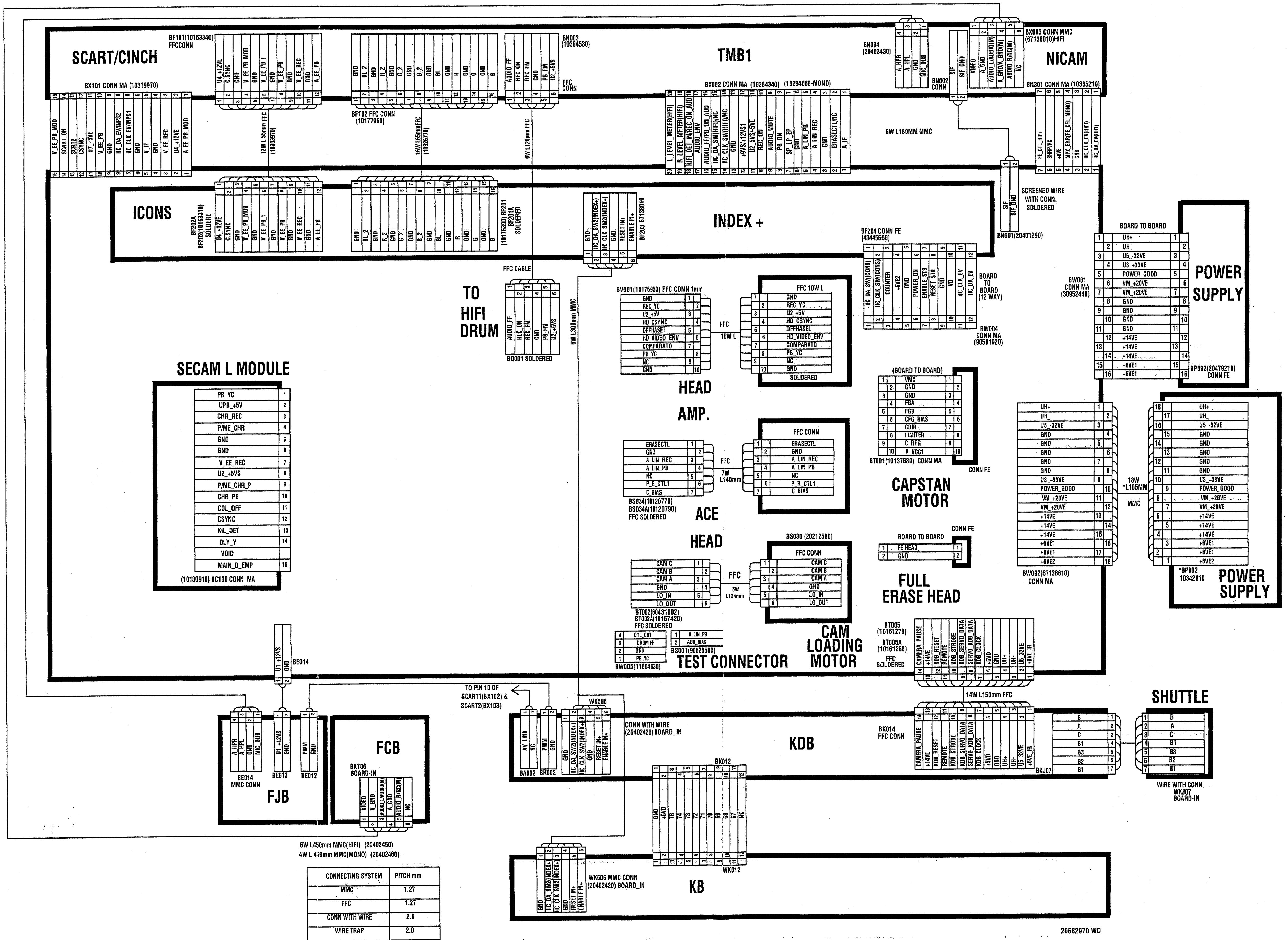
WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES (V3450 SV)


SCART/CINCH
BX101 CONN MA
BF101 FFC CONN
BF102 FFC CONN
BN003
FFC CONN
TMB1
BX002 CONN MA
BN002
BX003
NICAM
BN301
BN601
SCREENED WIRE
WITH CONN.
SOLDERED
ICONS
BF201A
SOLDERED
BF202
BF202A
SOLDERED
BF203
67138010
INDEX +
BF204 CONN FE
BOARD TO BOARD
POWER SUPPLY
BW001
CONN MA
BP002
CONN FE
FFC SOLDERED
BT002
BT002A
CAM
LOADING
MOTOR
BOARD TO BOARD
CONN FE
BS030
FULL
ERASE HEAD
TO
HIFI
DRUM
BQ001 SOLDERED
BV001 FFC CONN 1mm
FFC
10W L
FFC 10W L
SOLDERED
HEAD
AMP.
BOARD
TO
BOARD
BF401
CONN MA
SECAM L MODULE
PB_YC
UPB_+5V
CHR_REC
P/ME_CHR
GND
GND
V_EE_REC
U2_+5VS
P/ME_CHR_P
CHR_PB
COL_OFF
CSYNC
KIL_DET
DLY_Y
VOID
MAIN_D_EMP
BT001 CONN MA
(BOARD TO BOARD)
CAPSTAN
MOTOR
BS031
BS031A
FFC SOLDERED
ACE
HEAD
FFC CONN
BW002
CONN MA
*BP002
POWER
SUPPLY
(SENSAR VERSION
WITH ICONS BOARD)
BW005
BS001
TEST CONNECTOR
BT003
BT003A
FFC
SOLDERED
FCB
BJ04
KDB
BK14

WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES (VPH 6600 N - T8006 HIFI - M 9560 HIFI - M 9560 SA - M 9680 HIFI)

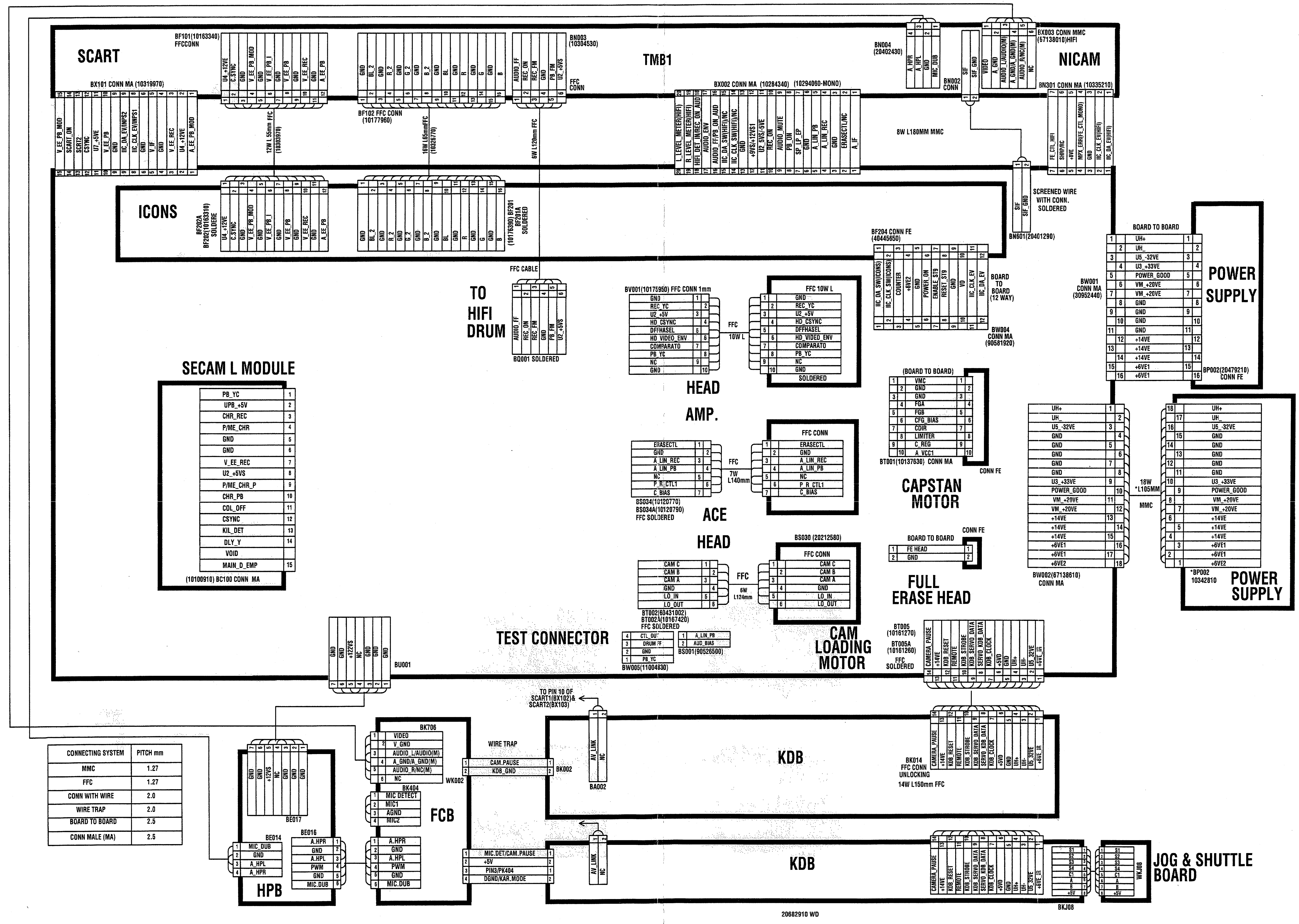

SCART
BX101
V_EE_PB_MOD
SCART_ON
SCRT2
CSYNC
U7_+5VE
V_EE_PB
GND
IIC_DA_EV/NFS2
IIC_CLK_EV/NFS1
GND
V_IF
GND
V_EE_REC
U4_+12VE
A_EE_PB_MOD
BF101
U4_+12VE
C_SYNC
GND
V_EE_PB_MOD
GND
V_EE_PB_I
GND
V_EE_PB
GND
V_EE_REC
GND
A_EE_PB
BF102
GND
BL_2
GND
R_2
GND
G_2
GND
B_2
GND
BL
GND
R
GND
G
GND
B
AUDIO_FF
REC_ON
REC_FM
GND
PB_FM
U2_+5VS
BN003
TMB1
BX002
L_LEVEL_METER(HIFI)
R_LEVEL_METER(HIFI)
HIFI_DET_IN/REC_ON_AUD
AUDIO_ENV
AUDIO_FF/PB_ON_AUD
IIC_DA_SW(HIFI)/NC
IIC_CLK_SW(HIFI)/NC
GND
+9VS/+12VS1
U2_5VS/-5VE
REC_ON
AUDIO_MUTE
PB_ON
SP_LP_E
GND
A_LIN_PB
A_LIN_REC
GND
ERASECTL/NC
A_IF
NICAM
BN002
SIF
SIF_GND
BX003
(HIFI)
VIDEO
V_GND
AUDIO L/AUDIO(M)
A.GND/A.GND(M)
AUDIO R/NC(M)
NC
BN301
FE_CTL_HIFI
SHRP/RC
+8VE
MPX_ERR(FE_CTL_MONO)
GND
IIC_CLK_EV(HIFI)
IIC_DA_EV(HIFI)
BN601
SIF
SIF_GND
ICONS
BF201
BF201A
U4_+12VE
C.SYNC
GND
V_EE_PB_MOD
GND
V_EE_PB_I
GND
V_EE_PB
GND
V_EE_REC
GND
A_EE_PB
GND
BL_2
GND
R_2
GND
G_2
GND
B_2
GND
BL
GND
R
GND
G
GND
B
BF202
BF202A
GND
IIC_DA_SW2(INDEX+)
IIC_CLK_SW2(INDEX+)
GND
RESET IN+
ENABLE IN+
BF203
INDEX +
BF204
IIC_DA_SW(ICONS)
IIC_CLK_SW(ICONS)
COUNTER
+5VE2
GND
POWER_ON
ENABLE_ST9
RESET_ST9
GND
VD
IIC_CLK_EV
IIC_DA_EV
BW004
BW001
BP002
UH+
UH
U5_-32VE
U3_+33VE
POWER_GOOD
VM_+20VE
VM_+20VE
GND
GND
GND
GND
+14VE
+14VE
+14VE
+6VE1
+6VE1
POWER SUPPLY
CAM LOADING MOTOR
FFC CONN
CAM C
CAM B
CAM A
GND
LO_IN
LO_OUT
BT002
BT002A
BOARD TO BOARD
FE HEAD
GND
BS030
FULL ERASE HEAD
TO HIFI DRUM
AUDIO_FF
REC_ON
REC_FM
GND
PB_FM
U2_+5VS
BQ001
BV001
GND
REC_YC
U2_+5VS
HD_CSYNC
DFFHASEL
HD_VIDEO_ENV
COMPARATOR
PB_YC
NC
GND
HEAD AMP.
ERASECTL
GND
A_LIN_REC
A_LIN_PB
NC
P_R_CTL1
C_BIAS
BS034
BS034A
ACE HEAD
SECAM L MODULE
PB_YC
UPB_+5V
CHR_REC
P/ME_CHR
GND
GND
V_EE_REC
U2_+5VS
P/ME_CHR_P
CHR_PB
COL_OFF
CSYNC
KIL_DET
DLY_Y
VOID
MAIN_D_EMP
BC100
VMC
GND
GND
FGA
FGB
CFG_BIAS
CDIR
LIMITER
C_REG
A_VCC1
BT001
CAPSTAN MOTOR
BW002
UH+
UH_
U5_-32VE
GND
GND
GND
GND
GND
U3_+33VE
POWER_GOOD
VM_+20VE
VM_+20VE
+14VE
+14VE
+14VE
+6VE1
+6VE1
+6VE2
BP002
POWER SUPPLY
(SENSAR VERSION WITH ICONS BOARD)
CTL_OUT
DRUM FF
GND
PB_YC
BW005
A_LIN_PB
AUD_BIAS
BS001
TEST CONNECTOR
BT003
BT003A
CAMERA_PAUSE
+14VE
KDB_RESET
REMOTE
KDB_STROBE
KDB_SERVO_DATA
SERVO_KDB_DATA
KDB_CLOCK
+5VD
GND
UH+
UH-
U5_32VE
+6VE_IR
BJ04
NOT FOR ALL SETS
VIDEO
V_GND
AUDIO L/AUDIO(M)
A_GND/A_GND(M)
AUDIO R/NC(M)
NC
BJ06
NOT FOR ALL SETS
GND
IIC_DA_SW2(INDEX+)
IIC_CLK_SW2(INDEX+)
GND
RESET IN+
ENABLE IN+
KDB
BK014
CAMERA_PAUSE
+14VE
KDB_RESET
REMOTE
KDB_STROBE
KDB_SERVO_DATA
SERVO_KDB_DATA
KDB_CLOCK
+5VD
GND
UH+
UH-
U5_32VE
+6VE_IR

WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES (VPH 6790)


SCART/CINCH
BF101(10163340) FFCCONN
BX101 CONN MA (10319970)
BN003 (10304530)
FFC CONN
TMB1
BN004 (20402430)
BX003 CONN MMC (67138010)HIFI
NICAM
BX002 CONN MA (10284340) (10294060-MONO)
BN002 CONN
BN301 CONN MA (10335210)
BF102 FFC CONN (10177960)
12W L 55mm FFC (10303970)
16W L65mmFFC (10326770)
6W L120mm FFC
8W L180MM MMC
SCREENED WIRE WITH CONN. SOLDERED
BN601(20401290)
ICONS
BF202A BF202(10163310) SOLDERE
(10176390) BF201 BF201A SOLDERED
BF203 67138010
INDEX +
BF204 CONN FE (40445650)
BOARD TO BOARD (12 WAY)
BW004 CONN MA (90581920)
FFC CABLE
TO HIFI DRUM
BQ001 SOLDERED
6W L300mm MMC
BV001(10175950) FFC CONN 1mm
FFC 10W L
FFC 10W L
SOLDERED
HEAD AMP.
BOARD TO BOARD
BW001 CONN MA (30952440)
POWER SUPPLY
BP002(20479210) CONN FE
SECAM L MODULE
(10100910) BC100 CONN MA
(BOARD TO BOARD)
BT001(10137630) CONN MA
CONN FE
CAPSTAN MOTOR
FFC CONN
FFC 7W L140mm
BS034(10120770) BS034A(10120790) FFC SOLDERED
ACE HEAD
BS030 (20212580)
FFC CONN
FFC 8W L124mm
BT002(60431002) BT002A(10167420) FFC SOLDERED
CONN FE
BOARD TO BOARD
FULL ERASE HEAD
CAM LOADING MOTOR
BT005 (10161270) BT005A (10161260) FFC SOLDERED
BS001(90526500)
BW005(11004830)
TEST CONNECTOR
18W *L105MM MMC
BW002(67138610) CONN MA
*BP002 10342810
POWER SUPPLY
BE014
TO PIN 10 OF SCART1(BX102) & SCART2(BX103)
WK506
14W L150mm FFC
SHUTTLE
BE014 MMC CONN
BE013
BE012
FJB
FCB
BK706 BOARD-IN
CONN WITH WIRE (20402420) BOARD_IN
BA002
BK002
KDB
BK014 FFC CONN
BK012
BKJ07
WIRE WITH CONN. WKJ07 BOARD-IN
6W L450mm MMC(HIFI) (20402450)
4W L 450mm MMC(MONO) (20402460)
WK012
WK506 MMC CONN (20402420) BOARD_IN
KB
20682970 WD

CONNECTING SYSTEM	PITCH mm
MMC	1.27
FFC	1.27
CONN WITH WIRE	2.0
WIRE TRAP	2.0
BOARD TO BOARD	2.5
CONN MALE (MA)	2.5

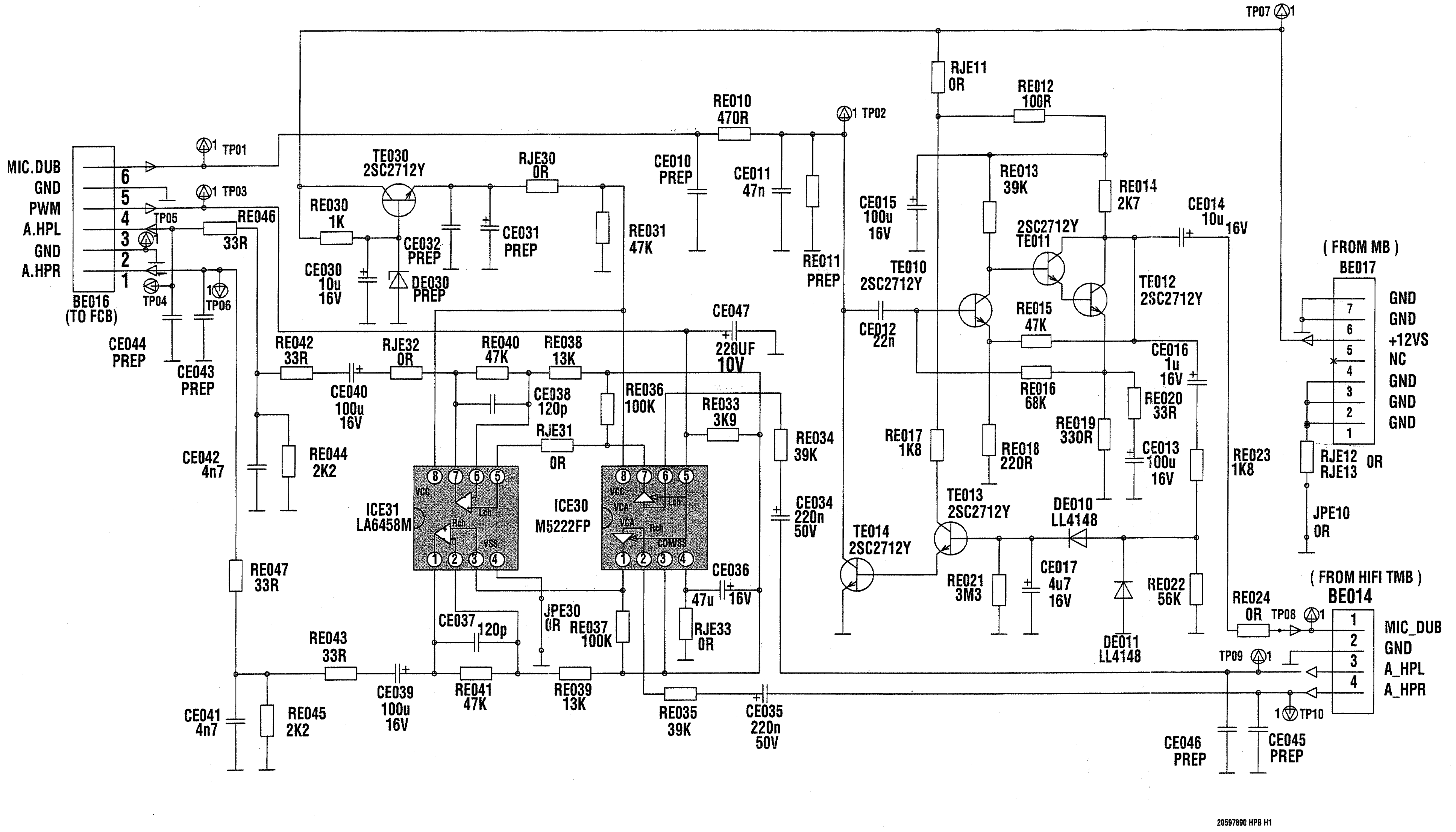
WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES (VPH 6750 - VPH 6780 - VR 8083H)


SCART
BF101(10163340) FFCCONN
BX101 CONN MA (10319970)
TMB1
BN003 (10304530)
FFC CONN
BX002 CONN MA (10284340) (10294060-MONO)
BN004 (20402430)
BN002 CONN
BX003 CONN MMC (67138010)HIFI
NICAM
BN301 CONN MA (10335210)
8W L180MM MMC
12W L 55mm FFC (10303970)
16W L65mmFFC (10326770)
6W L120mm FFC
BF102 FFC CONN (10177960)
ICONS
BF202A BF202(10163310) SOLDERE
BF201 (10176390) BF201A SOLDERED
SCREENED WIRE WITH CONN. SOLDERED
BN601(20401290)
BF204 CONN FE (40445650)
BOARD TO BOARD (12 WAY)
BW004 CONN MA (90581920)
FFC CABLE
TO HIFI DRUM
BQ001 SOLDERED
BV001(10175950) FFC CONN 1mm
FFC 10W L
HEAD AMP.
BS034(10120770) BS034A(10120790) FFC SOLDERED
FFC CONN
FFC 7W L140mm
ACE HEAD
BS030 (20212580)
FFC 6W L124mm
BT002(60431002) BT002A(10167420) FFC SOLDERED
CAM LOADING MOTOR
TEST CONNECTOR
BW005(11004830)
BS001(90526500)
(BOARD TO BOARD)
BT001(10137630) CONN MA
CONN FE
CAPSTAN MOTOR
BOARD TO BOARD
FULL ERASE HEAD
BT005 (10161270) BT005A (10161260) FFC SOLDERED
BOARD TO BOARD
BW001 CONN MA (30952440)
POWER SUPPLY
BP002(20479210) CONN FE
18W *L105MM MMC
BW002(67138610) CONN MA
*BP002 10342810
POWER SUPPLY
SECAM L MODULE
(10100910) BC100 CONN MA
BU001
TO PIN 10 OF SCART1(BX102)& SCART2(BX103)
KDB
BA002
BK002
BK014 FFC CONN UNLOCKING 14W L150mm FFC
WIRE TRAP
BK706
WK002
BK404
FCB
BE017
BE014
BE016
HPB
KDB
JOG & SHUTTLE BOARD
WKJ08
BKJ08
20682910 WD

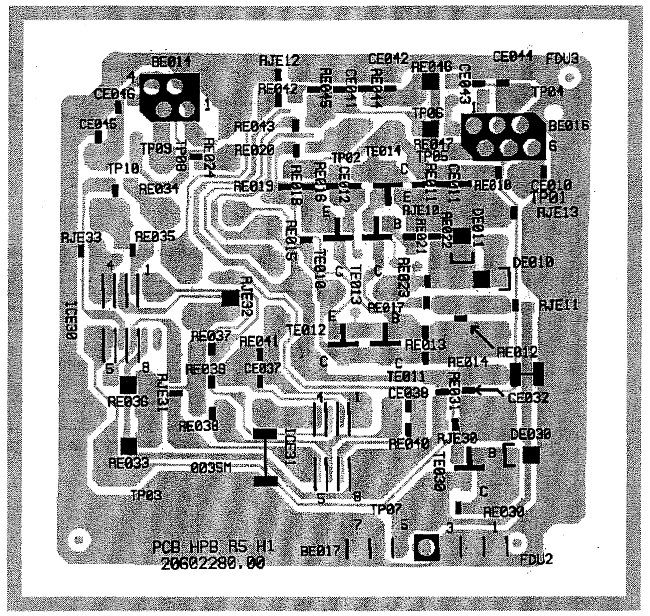
CONNECTING SYSTEM	PITCH mm
MMC	1.27
FFC	1.27
CONN WITH WIRE	2.0
WIRE TRAP	2.0
BOARD TO BOARD	2.5
CONN MALE (MA)	2.5

AMPLIFIER HEADPHONE/MICROPHONE BOARD - PLATINE AMPLIFICATEUR CASQUE/MICRO - VERSTÄRKERPLATTE KOPFHÖRER/MIKROFON - PIASTRA MICROFONO/AMPLIFICATORE CUFFIA - PLACA AMPLIFICADOR AURICULARES/MICRÓFONO (M 9680 HIFI)

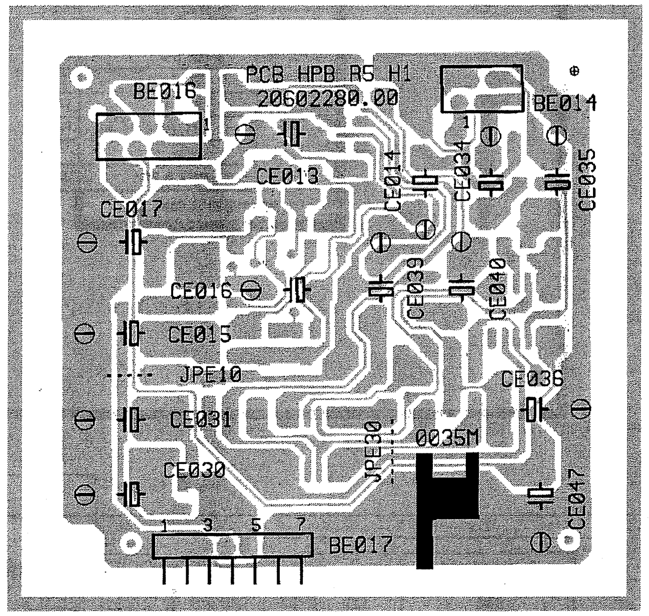
SCHEMATIC DIAGRAM -SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


TP07 1
RJE11 0R
RE012 100R
RE010 470R
TP02 1
TP01 1
TP03 1
MIC.DUB
GND
PWM
A.HPL
GND
A.HPR
BE016 (TO FCB)
TP05
TP04
TP06 1
RE046 33R
TE030 2SC2712Y
RJE30 0R
RE030 1K
CE032 PREP
CE030 10u 16V
DE030 PREP
CE031 PREP
RE031 47K
CE010 PREP
CE011 47n
RE011 PREP
CE015 100u 16V
TE010 2SC2712Y
CE012 22n
RE013 39K
RE014 2K7
2SC2712Y TE011
CE014 10u 16V
TE012 2SC2712Y
RE015 47K
CE016 1u 16V
RE016 68K
RE020 33R
RE019 330R
CE013 100u 16V
RE017 1K8
RE018 220R
TE013 2SC2712Y
DE010 LL4148
TE014 2SC2712Y
RE021 3M3
CE017 4u7 16V
DE011 LL4148
RE022 56K
RE023 1K8
CE044 PREP
CE043 PREP
RE042 33R
RJE32 0R
CE040 100u 16V
RE040 47K
RE038 13K
CE038 120p
RE036 100K
RJE31 0R
RE033 3K9
RE034 39K
CE047 220UF 10V
CE034 220n 50V
CE042 4n7
RE044 2K2
ICE31 LA6458M
ICE30 M5222FP
VCC
VCA
Lch
Rch
VSS
COM/SS
CE036 47u 16V
RE047 33R
CE037 120p
JPE30 0R
RE037 100K
RJE33 0R
RE043 33R
CE039 100u 16V
RE041 47K
RE039 13K
RE035 39K
CE035 220n 50V
CE041 4n7
RE045 2K2
(FROM MB)
BE017
GND
GND
+12VS
NC
GND
GND
GND
RJE12 0R
RJE13
JPE10 0R
(FROM HIFI TMB)
BE014
RE024 0R
TP08 1
TP09 1
MIC_DUB
GND
A_HPL
A_HPR
TP10 1
CE046 PREP
CE045 PREP
20597890 HPB H1

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre

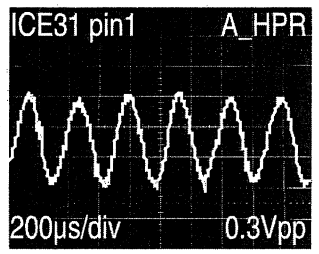

BE014
BE016
PCB HPB R5 H1
20602280.00
BE017
FDU2
TP01
TP03
TP07
RJE33
RJE11
RJE13
DE030
CE032

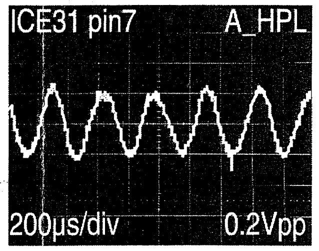
Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

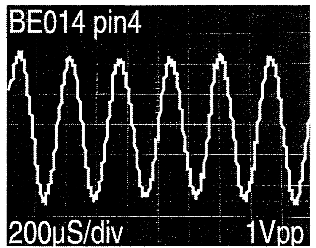

PCB HPB R5 H1
20602280.00
BE016
BE014
CE013
CE014
CE034
CE035
CE017
CE016
CE039
CE040
CE015
JPE10
CE036
CE031
JPE30
0035M
CE030
CE047
1
3
5
7
BE017

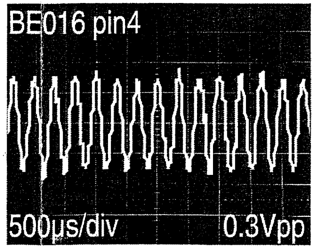
HPB		MODE		
LOC	PIN	EE	PLAY	REC.
ICE30	1	5.6	5.6	5.5
	2	5.6	5.6	5.6
	3	5.7	5.6	5.6
	4	0	0	0
	5	5.6	5.6	5.5
	6	5.6	5.6	5.6
	7	5.6	5.6	5.5
	8	11.4	11.4	11.3
ICE31	1	5.6	5.6	5.5
	2	5.6	5.6	5.6
	3	5.6	5.6	5.6
	4	0	0	0
	5	5.6	5.6	5.5
	6	5.6	5.6	5.6
	7	5.6	5.6	5.5
	8	11.4	11.4	11.3
TE030	E	11.4	11.4	11.4
	B	12.1	12.1	12
	C	12.2	12.2	12.2

HPB		MODE		
LOC	PIN	EE	PLAY	REC.
TE014	E	0	0	0
	B	0	0	0
	C	0	0	0
TE013	E	0	0	0
	B	0	0	0
	C	12.2	12.2	12.2
TE010	E	0	0	0
	B	0.7	0.6	0.6
	C	1.9	1.9	0
TE011	E	1.5	1.4	1.4
	B	2	1.9	1.9
	C	5	5	5
TE012	E	0.8	0.7	0.7
	B	1.5	1.4	1.4
	C	5.1	5	5





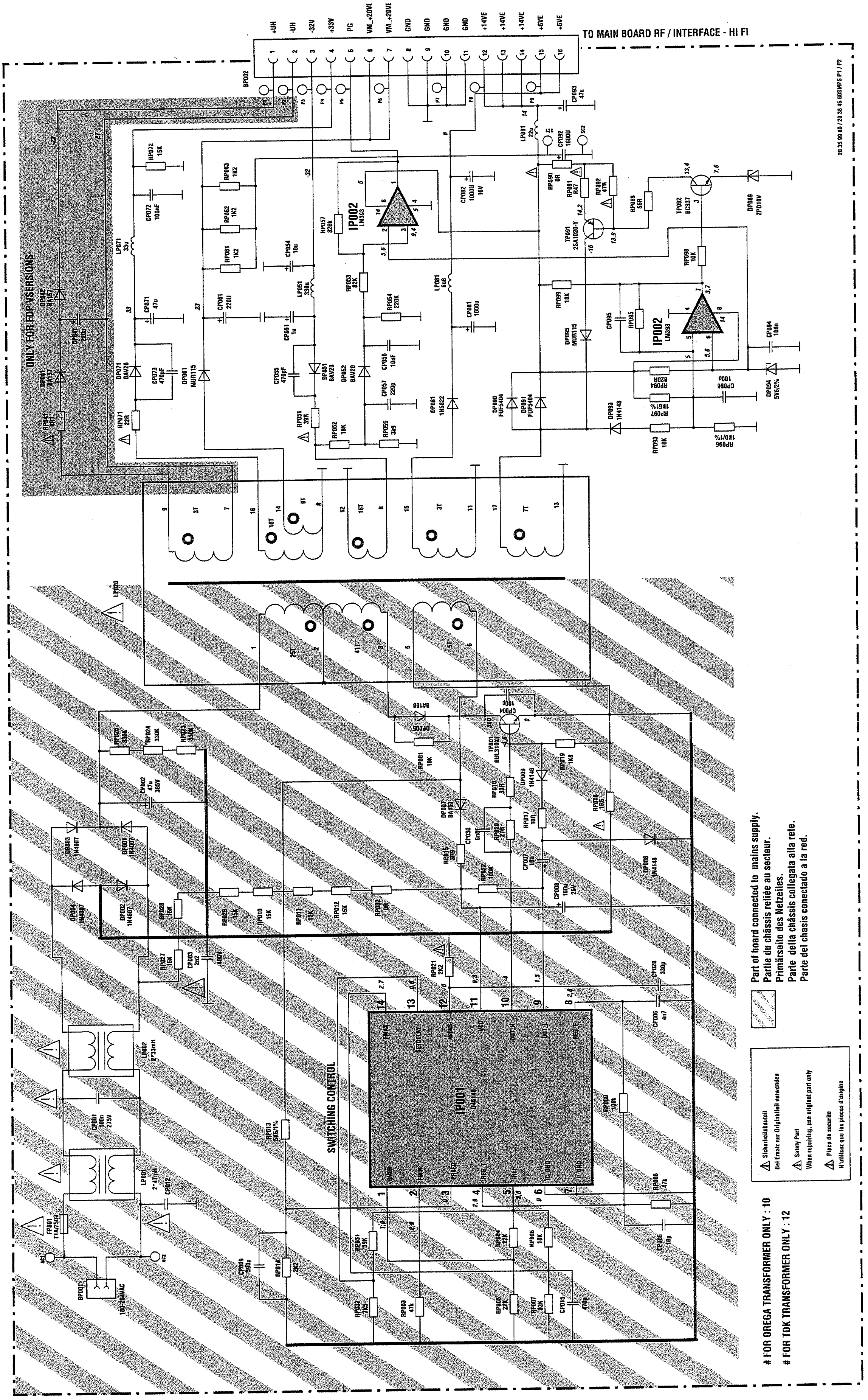




POWER SUPPLY - ALIMENTATION - NETZTEIL - ALIMENTAZIONE

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

(VPH6600N-VPH6601-VPH6680-VPH6750-VPH6751-VPH6780-M9560HIFI/SA-M9571HIFI M9680HIFI-T8006HIFI-V3450SV-VR6081-VR6087/F-VR7081-VR8083H-VR8087)



+UH
-UH
-32V
+33V
PG
VM_+20VE
VM_+20VE
GND
GND
GND
GND
+14VE
+14VE
+14VE
+6VE
+6VE
TO MAIN BOARD RF / INTERFACE - HI FI
BP002
ONLY FOR FDP VSERSIONS
IP002 LM393
IP001 TA8148
SWITCHING CONTROL
TP001 BUL310
TP091 2SA1020-Y
TP092 BC337
FP001 T1A/250V
BP001
180-264VAC
LP001 2*47mH
LP002 2*33mH
CP001 100n 275V
CP002 47u 385V

Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzeiles.
Parte della châssis collegata alla rete.
Parte del chasis conectado a la red.

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

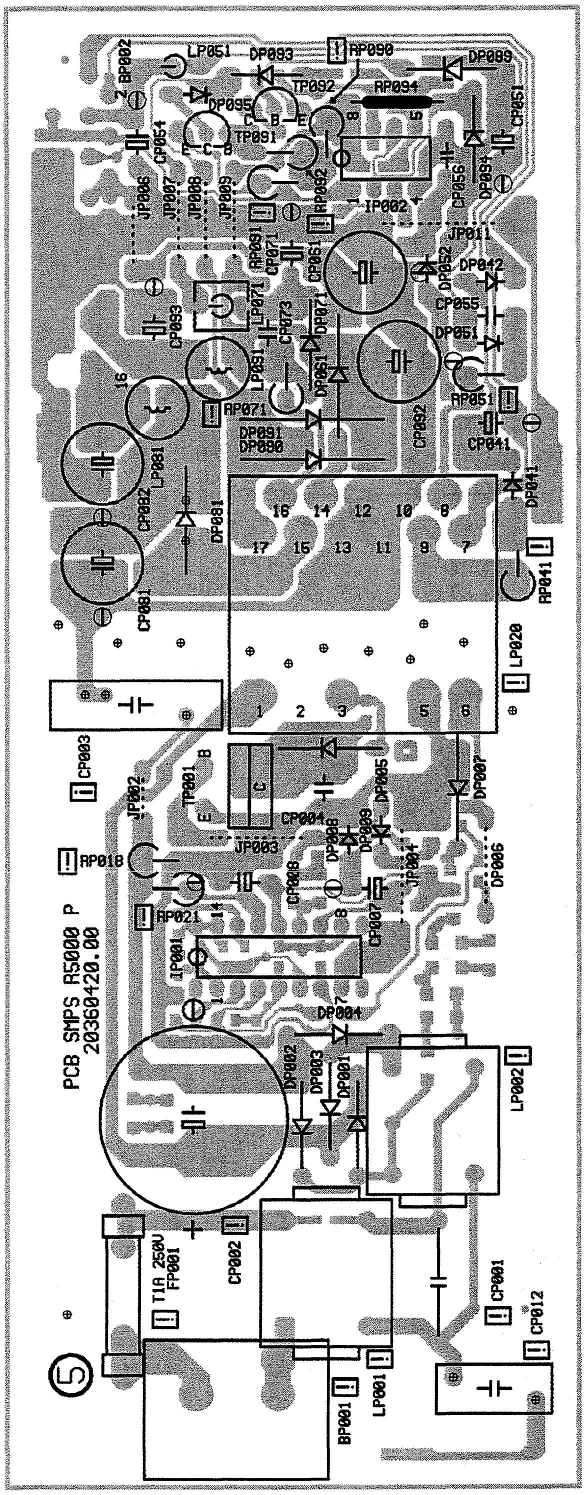
⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

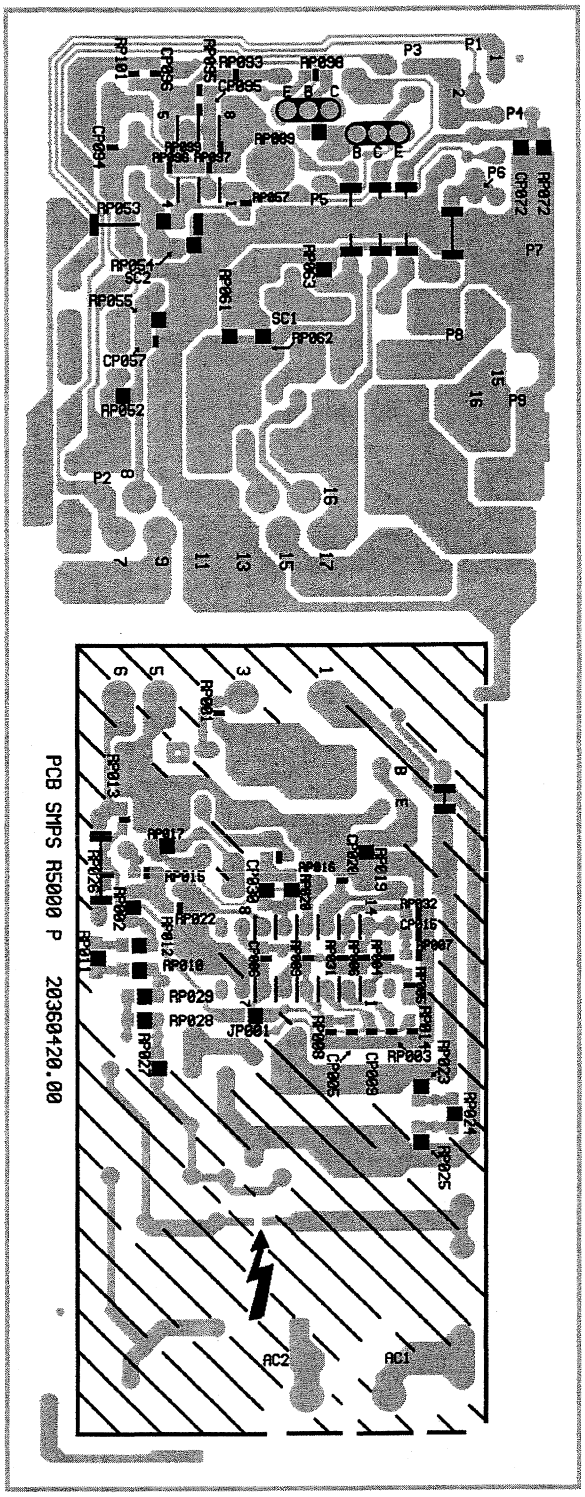
FOR OREGA TRANSFORMER ONLY : 10
FOR TDK TRANSFORMER ONLY : 12

POWER SUPPLY BOARD - PLATINE ALIMENTATION - NETZTEIL LEITERPLATTE - PIASTRA ALIMENTAZIONE - PLATINA ALIMENTACIÓN

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes


RP002
LP051
DP093
RP090
DP089
TP092
RP094
DP095
TP091
C B E
E C B
CP054
CP051
JP006
JP007
JP008
JP009
RP091
RP092
IP002
CP056
DP094
JP011
CP071
CP061
DP052
DP042
CP053
LP071
CP073
DP071
CP055
DP051
LP091
DP061
RP071
RP051
CP092
DP091
DP090
CP041
DP041
CP082
LP081
DP081
CP081
RP041
LP020
16 14 12 10 8
17 15 13 11 9 7
1 2 3 5 6
CP003
JP002
TP001
B C E
CP004
DP005
DP007
RP010
JP003
DP008
DP009
JP004
DP006
CP006
CP007
RP021
IP001
DP004
DP002
DP003
DP001
LP002
PCB SMPS R5000 P
20360420.00
T1A 250V
FP001
CP002
CP001
CP012
BP001
LP001
5

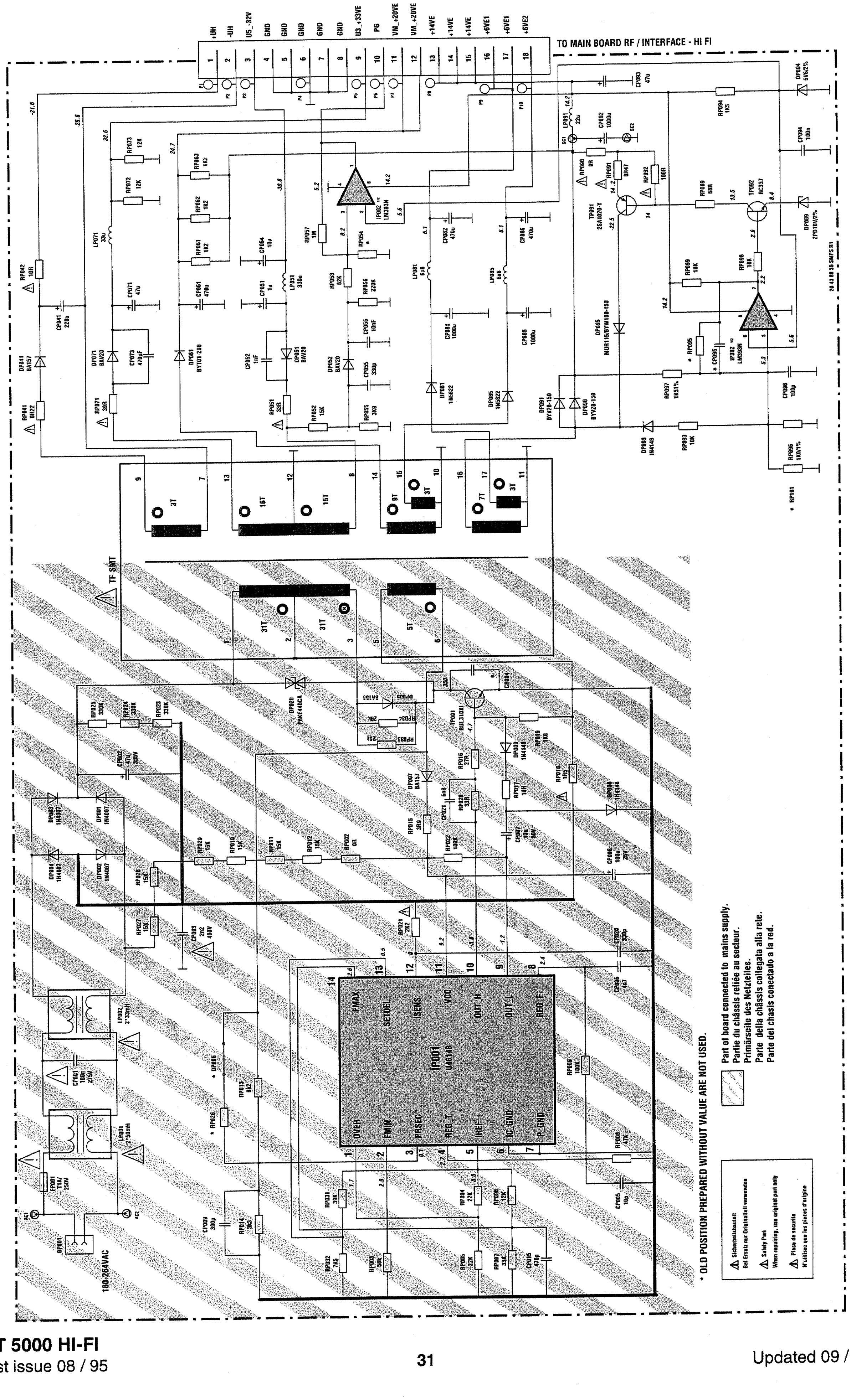
Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre


RP101
CP035
RP035
RP093
RP090
CP095
P3
P1
P4
E B C
B C E
RP089
CP094
RP098
RP097
RP057
P5
P6
CP072
RP072
RP053
P7
RP054
SC2
RP055
RP061
RP063
SC1
RP062
P8
CP057
RP052
P9
P2
16
7 9 11 13 15 17
6 5 3 1
RP001
RP013
RP017
RP015
RP016
CP020
RP019
CP030
RP020
RP032
CP015
RP026
RP002
RP022
RP012
RP007
RP011
RP010
RP029
RP028
JP001
RP008
RP003
CP005
CP009
RP023
RP024
RP025
AC2
AC1
PCB SMPS R5000 P 20360420.00

POWER SUPPLY - ALIMENTATION - NETZTEIL - ALIMENTAZIONE -

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA -ESQUEMA

(VPH 6697 SENSAR - VPH 6790)


+UH
-UH
U5_-32V
GND
GND
GND
GND
GND
U3_+33VE
PG
VM_+20VE
VM_+20VE
+14VE
+14VE
+14VE
+6VE1
+6VE1
+6VE2
TO MAIN BOARD RF / INTERFACE - HI FI
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
CP093 47u
RP094 1K5
DP094 5V6/2%
LP091 22u
CP092 1000u
SC1
SC2
CP094 100n
RP090 0R
RP091 0R47
RP092 100R
RP089 68R
TP091 2SA1020-Y
TP092 BC337
DP089 ZPD10V/2%
RP099 10K
RP098 10K
IP082 LM393N
IP082 LM393N
DP095 MUR115/BYW100-150
RP095
CP095
RP097 1K51%
CP096 100p
DP091 BYV28-150
DP090 BYV28-150
DP093 1N4148
RP093 10K
RP096 1K0/1%
RP101
RP073 12K
RP072 12K
LP071 33u
CP071 47u
CP073 470pF
DP071 BAV20
RP071 39R
RP063 1K2
RP062 1K2
RP061 1K2
CP061 470u
DP061 BYT01-200
CP054 10u
CP051 1u
LP051 330u
CP052 1nF
DP051 BAV20
RP051 33R
RP052 15K
RP057 1M
RP054
RP053 82K
RP056 220K
CP056 10nF
DP052 BAV20
CP055 330p
RP055 3K9
LP081 6u8
CP082 470u
CP081 1000u
DP081 1N5822
LP085 6u8
CP086 470u
CP085 1000u
DP085 1N5822
RP042 10R
CP041 220u
DP041 BA157
RP041 0R22
3T
16T
15T
9T
3T
7T
3T
TF-SMT
31T
31T
5T
DP020 P6KE440CA
DP005 BA156
RP034 20R
RP033 20R
TP001 BUL310XI
CP004
RP025 330K
RP024 330K
RP023 330K
CP002 47u 385V
DP003 1N4007
DP001 1N4007
DP004 1N4007
DP002 1N4007
RP029 15K
RP010 15K
RP011 15K
RP012 15K
RP002 0R
RP028 15K
RP027 15K
CP003 2n2 400V
DP007 BA157
RP016 27R
RP020 33R
CP021 6n8
RP015 3R9
RP022 100K
DP009 1N4148
RP017 10R
CP007 10u 50V
RP018 1K0
RP019 1K0
DP006 1N4148
CP008 100u 25V
RP021 2K2
CP020 330p
LP002 2*33mH
CP001 100n 275V
LP001 2*50mH
FP001 T4A/250V
AC1
AC2
BP001
180-264VAC
DP008
RP026
RP013 8K2
CP006 4n7
RP009 100K
IP001 U4514B
FMAX
SETDEL
ISENS
VCC
OUT_H
OUT_L
REG_F
OVER
FMIN
PRSEC
REG_T
IREF
IC_GND
P_GND
RP008 47K
RP031 39K
RP004 22K
RP006 12K
CP005 10p
CP009 390p
RP014 3K3
RP032 7K5
RP003 56K
RP005 22K
RP007 33K
CP015 470p
20 43 88 30 SMPS R1

* OLD POSITION PREPARED WITHOUT VALUE ARE NOT USED.

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

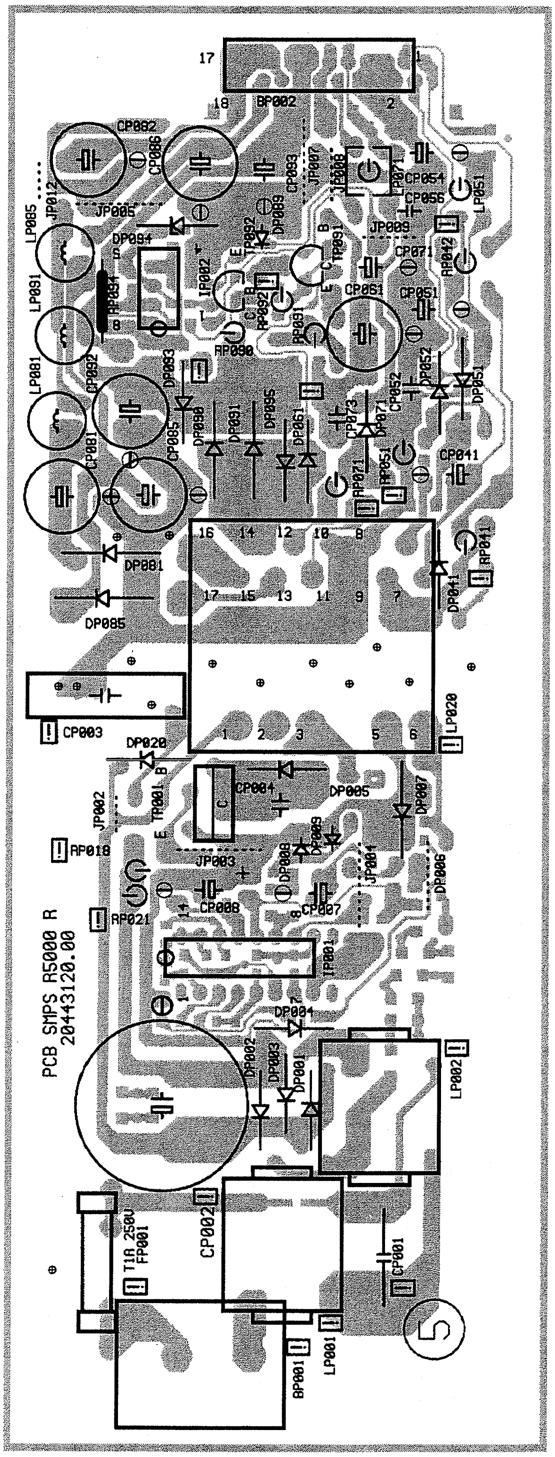
⚠ Safety Part
When repairing, use original part only

⚠ Pièce de securite
N'utilisez que les pièces d'origine

▨ Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteiles.
Parte della châssis collegata alla rete.
Parte del chasis conectado a la red.

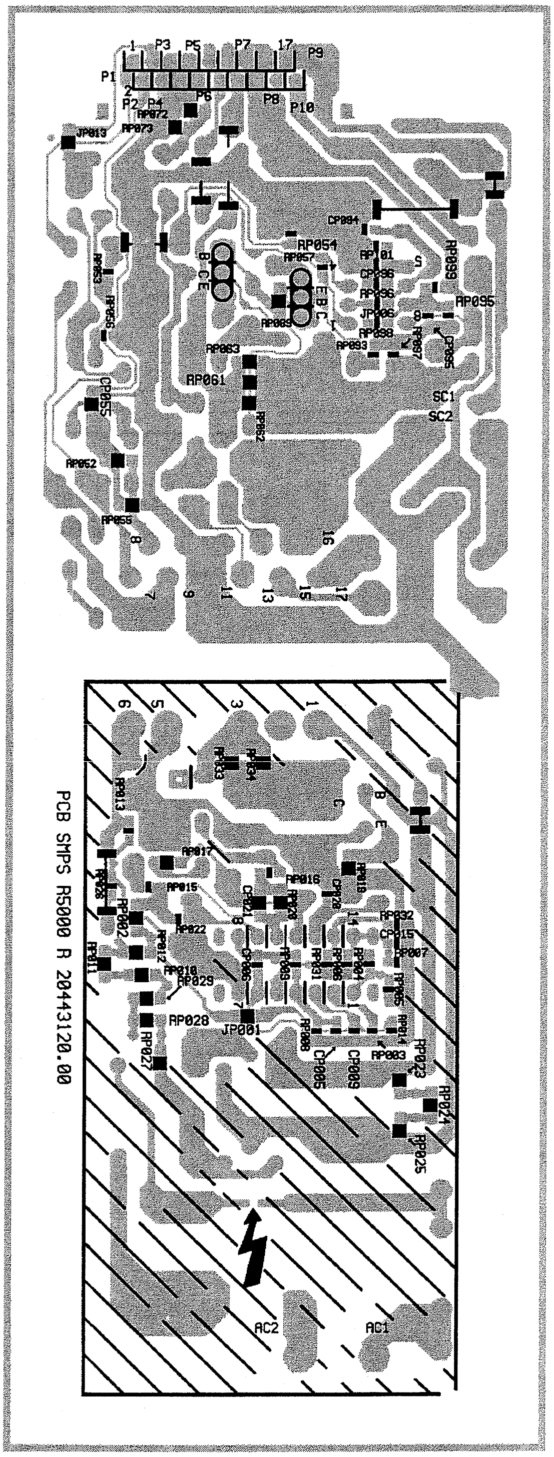
POWER SUPPLY BOARD - PLATINE ALIMENTATION - NETZTEIL LEITERPLATTE - PIASTRA ALIMENTAZIONE - PLATINA ALIMENTACIÓN

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes



BP002
CP082
CP086
CP083
JP007
JP008
CP054
CP056
LP051
LP085
JP012
JP005
DP094
TR092
RP092
DP089
JP009
TR091
CP071
RP042
LP091
RP094
IP002
CP061
CP051
LP081
DP092
RP090
DP083
RP091
DP085
DP091
DP061
CP073
CP052
DP052
DP051
CP081
DP071
RP071
RP051
CP041
DP081
DP041
RP041
DP085
CP003
DP020
TR001
CP004
DP005
DP007
JP002
RP018
JP003
DP008
DP009
JP004
DP006
RP021
CP008
CP007
IP001
LP020
PCB SMPS R5000 R
20443120.00
DP004
DP002
DP003
DP001
LP002
T1A 250V
FP001
CP002
CP001
BP001
LP001

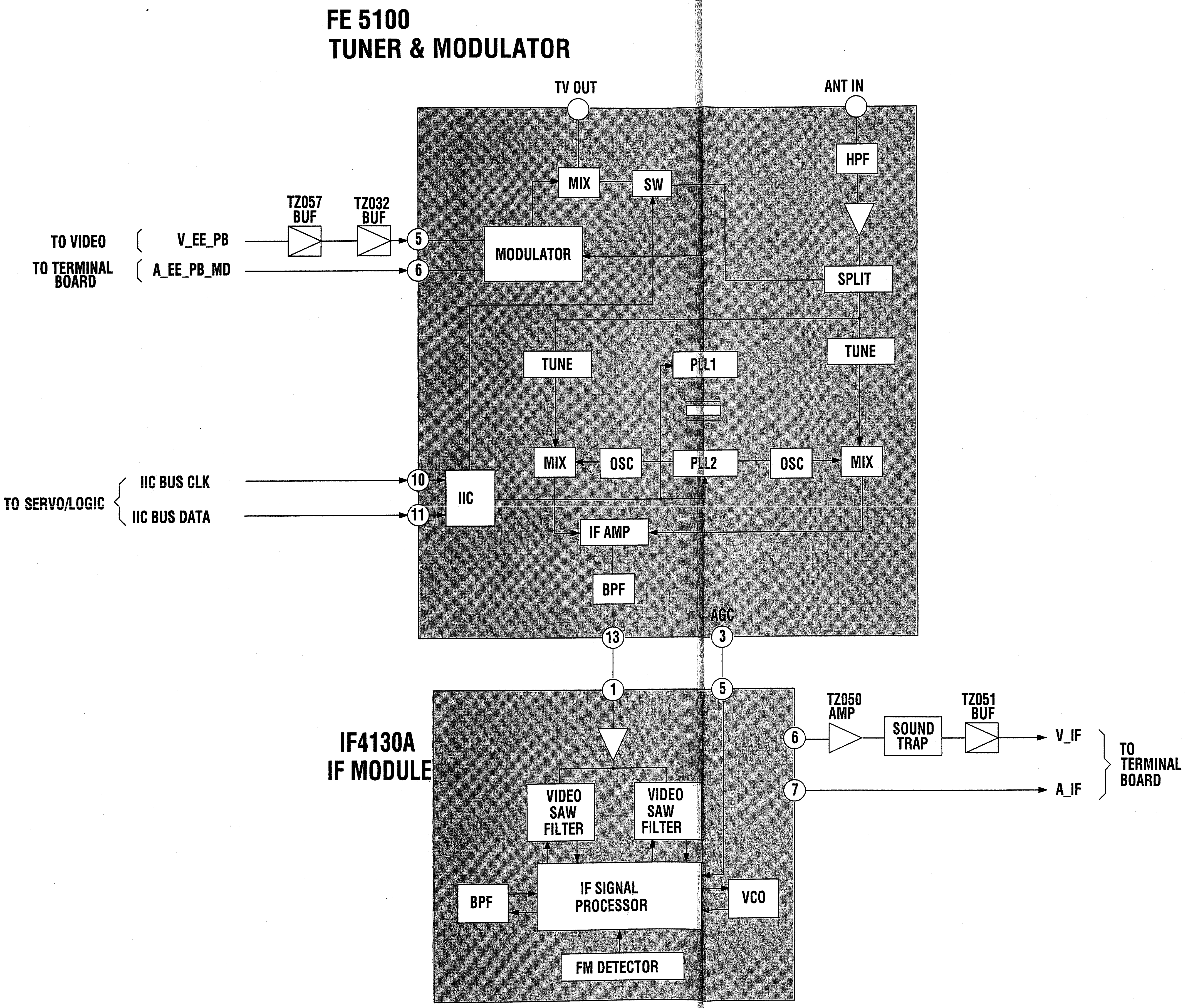
Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre



P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
RP072
RP073
JP013
CP084
RP054
RP057
RP053
RP056
RP001
CP096
RP096
JP006
RP098
RP093
RP099
RP095
RP063
RP061
RP062
SC1
SC2
CP055
RP052
RP055
PCB SMPS R5000 R 20443120.00
RP003
RP004
RP013
RP017
RP016
RP015
RP010
RP002
RP012
RP022
RP011
RP029
RP028
RP027
JP001
CP005
CP009
RP023
RP024
RP025
RP032
CP015
CP007
RP014
RP083
AC2
AC1

POWER SUPPLY INTERFACE / AUDIO SIGNAL PROCESSING - INTERFACE ALIMENTATION / CIRCUITS AUDIO - NETZEIL INTERFACE / AUDIO SIGNALVERARBEITUNG - INTERFACCIA ALIMENTAZIONE / ELABORAZIONE AUDIO - INTERFAZ ALIMENTACIÓN / TRATAMIENTO AUDIO

BLOCK DIAGRAM - SCHEMA SYNOPTIQUE - BLOCKSCHALTBILD - SCHEMA A BLOCCHI - ESQUEMA DE BLOQUES

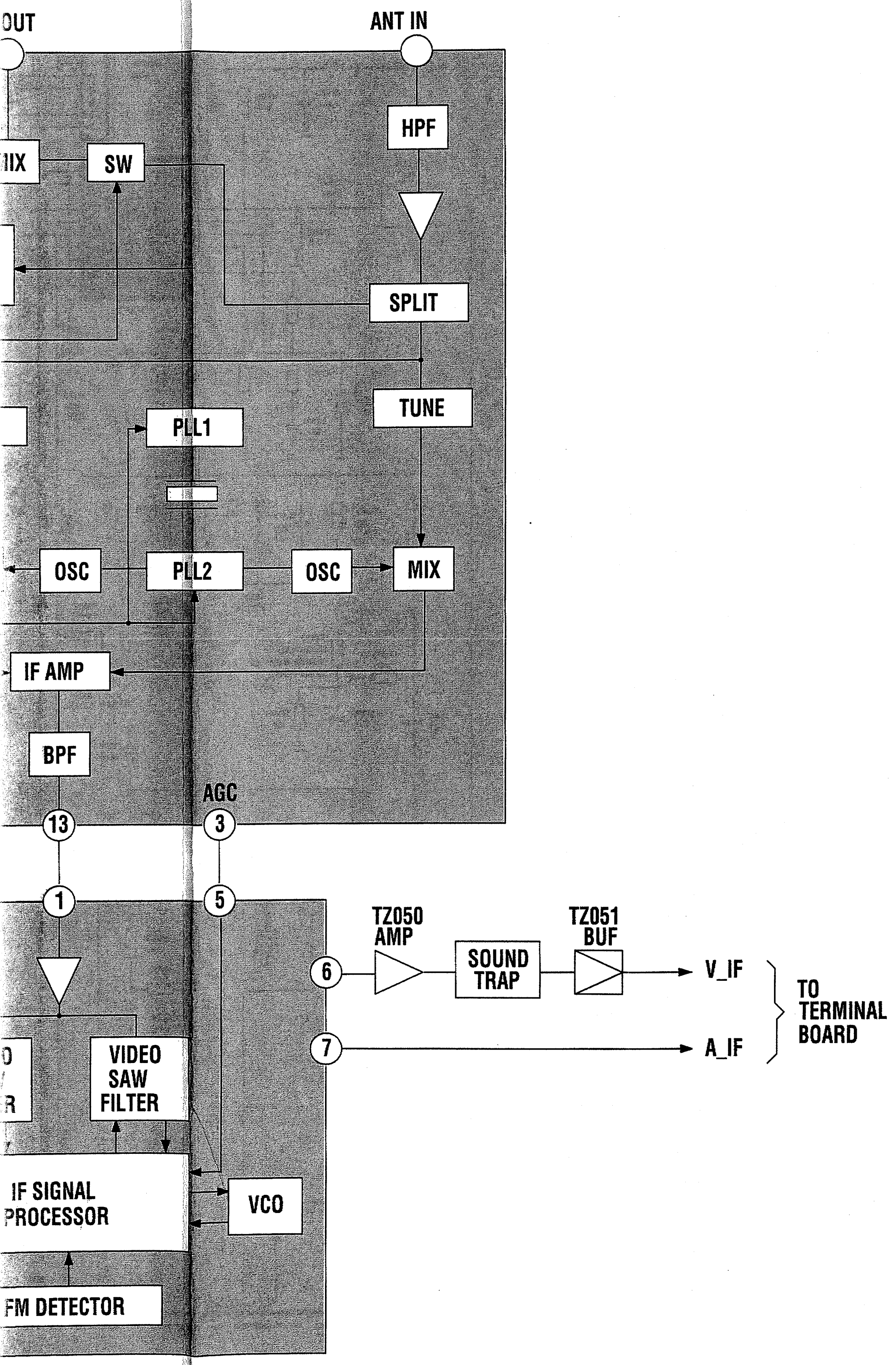

FE 5100
TUNER & MODULATOR
TV OUT
ANT IN
HPF
MIX
SW
TZ057 BUF
TZ032 BUF
TO VIDEO
TO TERMINAL BOARD
V_EE_PB
A_EE_PB_MD
5
6
MODULATOR
SPLIT
TUNE
PLL1
TUNE
MIX
OSC
PLL2
OSC
MIX
TO SERVO/LOGIC
IIC BUS CLK
IIC BUS DATA
10
11
IIC
IF AMP
BPF
AGC
13
3
1
5
IF4130A
IF MODULE
VIDEO SAW FILTER
VIDEO SAW FILTER
IF SIGNAL PROCESSOR
BPF
VCO
FM DETECTOR
6
7
TZ050 AMP
SOUND TRAP
TZ051 BUF
V_IF
A_IF
TO TERMINAL BOARD

MEAS
MESU
AU
ELABOR

INTER LOC
TUNER
IF
TG029
TG030
TG031
TN430
TN439

TERFACE ALIMENTATION / CIRCUITS AUDIO - NETZEIL INTERFACE / AUDIO
ORAZIONE AUDIO - INTERFAZ ALIMENTACIÓN / TRATAMIENTO AUDIO

A BLOCCHI - ESQUEMA DE BLOQUES

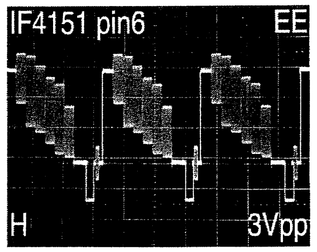

OUT
ANT IN
HPF
IIX
SW
SPLIT
TUNE
PLL1
OSC
PLL2
OSC
MIX
IF AMP
BPF
AGC
13
3
1
5
6
7
TZ050 AMP
SOUND TRAP
TZ051 BUF
V_IF
A_IF
TO TERMINAL BOARD
VIDEO SAW FILTER
IF SIGNAL PROCESSOR
VCO
FM DETECTOR

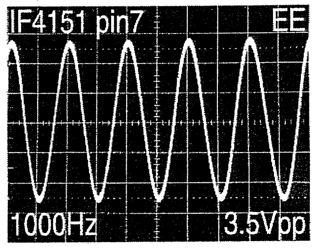
MEASUREMENTS POWER SUPPLY INTERFACE / AUDIO SIGNAL PROCESSING - MESURES INTERFACE / CIRCUITS AUDIO - MESSUNGEN NETZEIL INTERFACE / AUDIO SIGNALVERARBEITUNG - MISURI INTERFACCIA ALIMENTAZIONE / ELABORAZIONE AUDIO - MEDIDAS INTERFAZ ALIMENTACIÓN / TRATAMIENTO AUDIO

INTERFACE		MODE		
LOC	PIN	EE	PLAY	REC.
TUNER	1	0	0	0
	2	5.2	5.2	5.2
	3	7.8	7.8	7.8
	4	12.1	12.1	12.1
	5	0	0	0
	6	0	0	0
	7	12.2	12.2	12.2
	8	5.5	5.5	5.5
	9	32	32	32
	10	4.8	4.8	4.8
	11	4.6	4.6	4.6
	12	1	1	1
	13	1.9	1.9	1.9
IF	1	1.9	1.9	1.9
	2	0	0	0
	3	1	1	1
	4	9.7	9.7	9.7
	5	7.9	7.9	7.9
	6	5.3	5.3	5.3
	7	8.5	8.5	8.5
	8	0	0	0
	9	12.2	12.2	12.2
	10	0	0	0
TG029	E	0	0	0
	B	0	0	0
	C	0	10.8	0
TG030	E	0	0	0
	B	0	4.8	0
	C	12.2	0	12.2
TG031	E	12.2	11.7	12.2
	B	12.2	10.9	12.2
	C	0	11.7	0
TN430	E	13.6	13.6	0
	B	13.8	13.8	0
	C	13.9	13.9	13.8
TN439	E	0	0	0
	B	0	0	0.8
	C	13.5	13.5	0

INTERFACE		MODE		
LOC	PIN	EE	PLAY	REC.
TN640	E	4.8	4.8	4.8
	B	5.5	5.5	5.5
	C	12.2	12.2	12.2
TN641	E	2.8	2.8	2.8
	B	3.4	3.4	3.4
	C	5.5	5.5	5.5
TS030	E	0	0	0
	B	0	0	0.2
	C	13.9	13.9	13.4
TS039	E	0	0	7.5
	B	0	0	8.1
	C	13.9	13.9	13.4
TS119	E	0	0	0
	B	0	4.7	0
	C	4	0	4
TW001	E	0	0	0
	B	0.6	0.6	0.6
	C	0	0	0
TW002	E	31.5	31.5	31.5
	B	0	0	0
	C	31.5	31.5	31.5
TW003	E	12.2	12.2	12.2
	B	12.9	12.9	12.9
	C	12.4	12.4	12.4
TW005	E	5.1	5.1	5.1
	B	5.9	5.9	5.9
	C	5.5	5.5	5.5
TW006	E	0	0	0
	B	5.1	5.1	5.1
	C	0	0	0
TW008	E	8.4	8.4	8.4
	B	9	9	9
	C	13.1	13.1	13.1

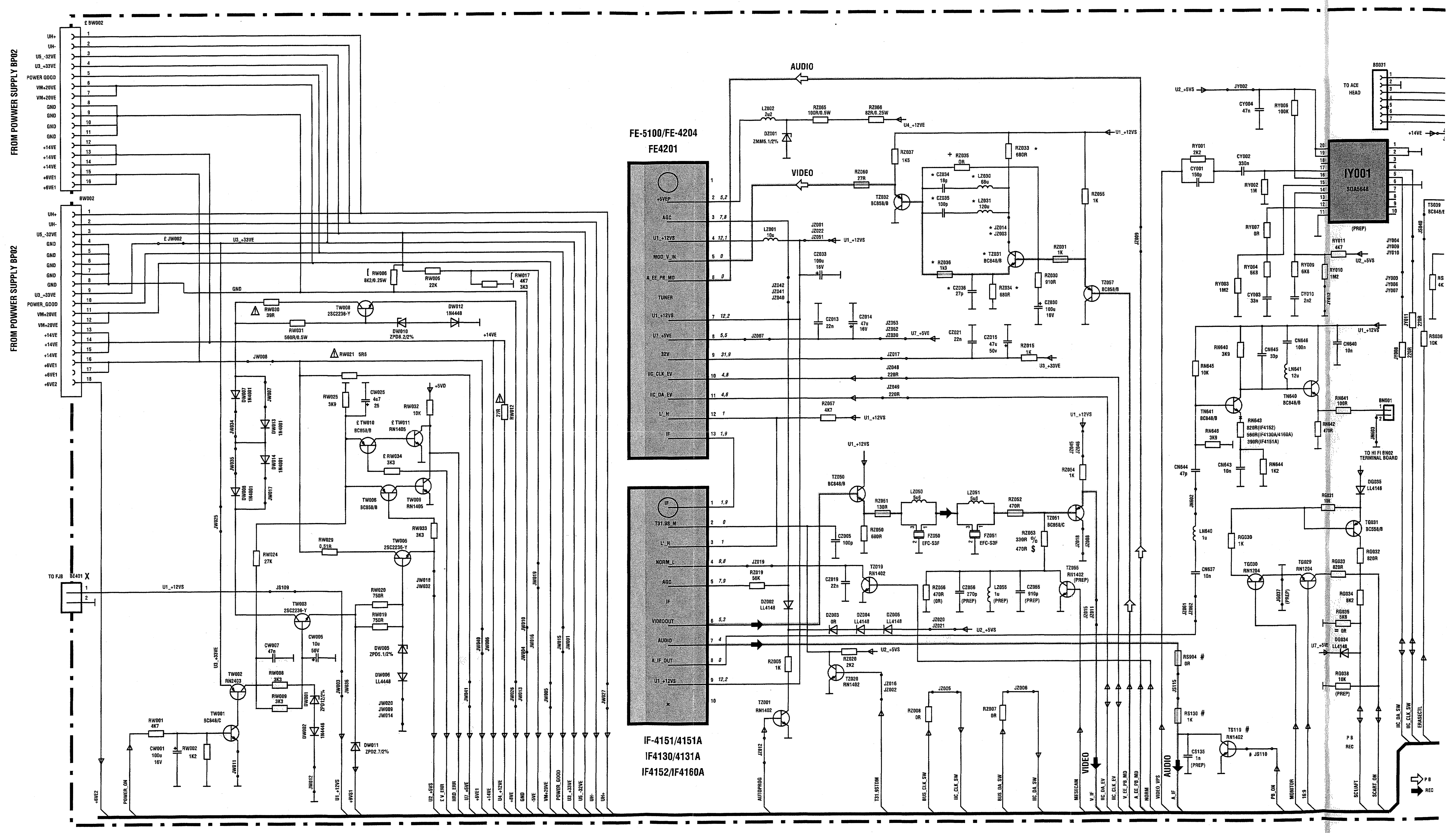
INTERFACE		MODE		
LOC	PIN	EE	PLAY	REC.
TW009	E	0	0	0
	B	0	0	0
	C	5	5	5
TZ001	E	0	0	0
	B	0	0	0
	C	7.5	7.5	7.5
TZ019	E	0	0	0
	B	4.9	4.9	4.9
	C	0	0	0
TZ020	E	0	0	0
	B	0	0	0
	C	4.3	4.3	4.3
TZ050	E	5.2	5.2	5.2
	B	5.9	5.9	5.9
	C	12	12	12
TZ051	E	2.6	2.6	2.6
	B	1.9	1.9	1.9
	C	0	0	0





POWER SUPPLY INTERFACE / AUDIO SIGNAL PROCESSING - INTERFACE ALIMENTATION / CIRCUITS AUDIO - NETZEIL INTERFACE / AUDIO SIGNALVERARBEITUNG - IN ALIMENTAZIONE / ELABORAZIONE AUDIO - INTERFAZ ALIMENTACIÓN / TRATAMIENTO AUDIO

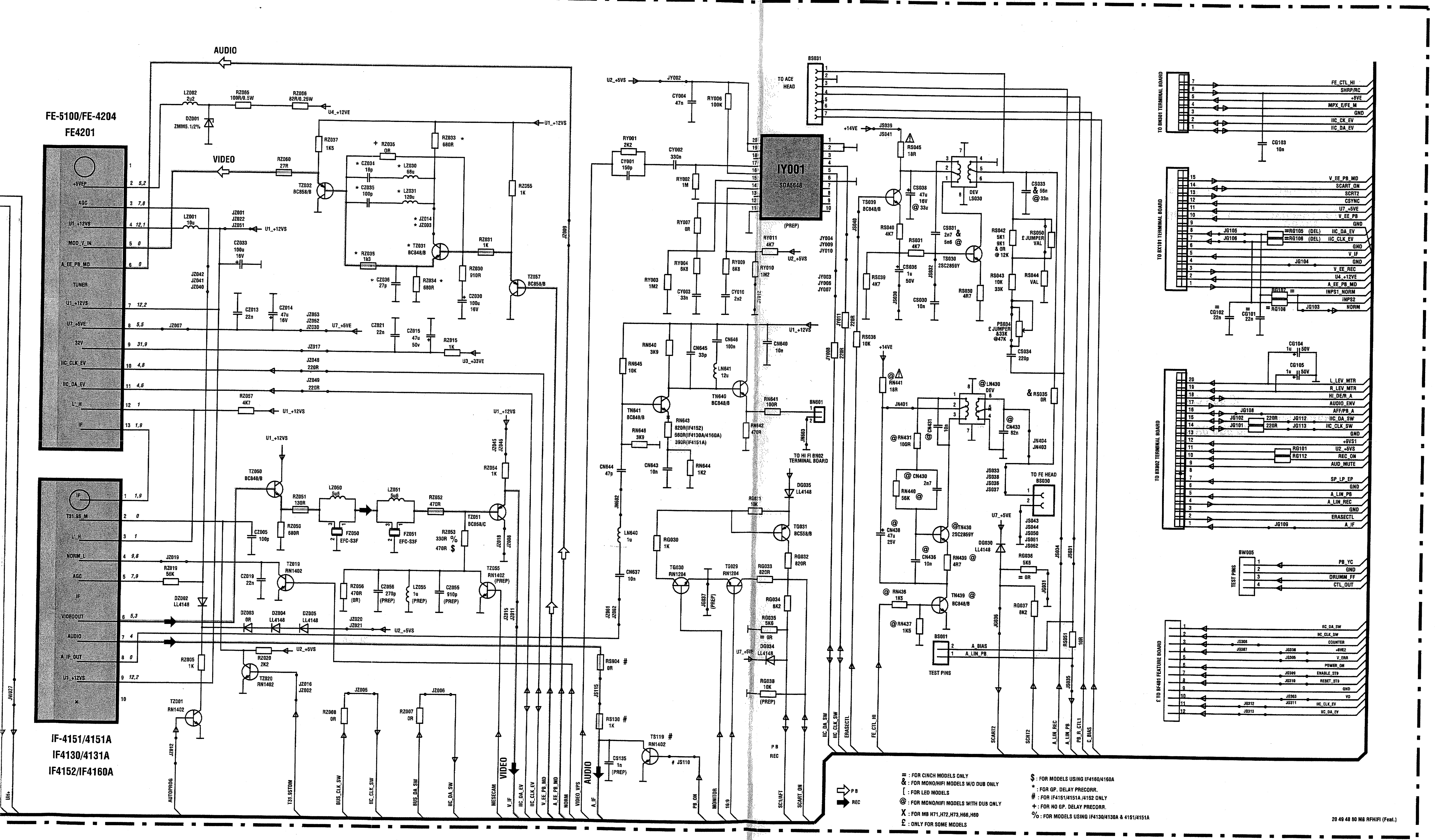
SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA **(VPH6600N - VPH6601 - VPH6680 - VPH6697 SENSAR - VPH6750 - VPH 6751 - VPH 6780 - VPH 6790 - M9560HIFI/S M9571HIFI - M9680HIFI - T8006HIFI - VR6087/F - VR7081 - VR 8083SH - VR8087)**



FROM POWWER SUPPLY BP02
FROM POWWER SUPPLY BP02
BW002
UH+
UH-
U5_-32VE
U3_+33VE
POWER GOOD
VM+20VE
GND
+14VE
+6VE1
+6VE2
AUDIO
VIDEO
FE-5100/FE-4204
FE4201
+5VEP
AGC
U1_+12VS
MOD_V_IN
A_EE_PB_MD
TUNER
U7_+5VE
32V
IIC_CLK_EV
IIC_DA_EV
L'_H
IF
T31.9S_M
NORM_L
VIDEOOUT
A_IF_OUT
IF-4151/4151A
IF4130/4131A
IF4152/IF4160A
TO FJB
BE401
TO ACE HEAD
BS031
IY001
SDA5648
(PREP)
TO HI FI BN02 TERMINAL BOARD
BN501
+6VE2
POWER_ON
U1_+12VS
+9VS1
U2_+5VS
£ V_EHR
HRD_EHR
U7_-5VE
+6VE1
+14VE
U4_+12VE
+8VE
GND
-5VE
VM+20VE
POWER_GOOD
U3_+33VE
U5_-32VE
UH-
UH+
AUTOPROG
T31.9STDM
BUS_CLK_SW
IIC_CLK_SW
BUS_DA_SW
IIC_DA_SW
MESECAM
V_IF
IIC_DA_EV
IIC_CLK_EV
V_EE_PB_MD
A_EE_PB_MD
NORM
VIDEO VPS
A_IF
PB_ON
MONITOR
16:9
SC1/AFT
SCART_ON
ERASECTL
PB
REC

RFACE ALIMENTATION / CIRCUITS AUDIO - NETZEIL INTERFACE / AUDIO SIGNALVERARBEITUNG - INTERFACCIA IÓN / TRATAMIENTO AUDIO

UEMA **(VPH6600N - VPH6601 - VPH6680 - VPH6697 SENSAR - VPH6750 - VPH 6751 - VPH 6780 - VPH 6790 - M9560HIFI/SA -**



AUDIO
VIDEO
FE-5100/FE-4204
FE4201
IF-4151/4151A
IF4130/4131A
IF4152/IF4160A
IY001
SDA5648
TO ACE HEAD
TO HI FI BN02 TERMINAL BOARD
TO FE HEAD
TEST PINS
TO BN301 TERMINAL BOARD
TO BX101 TERMINAL BOARD
TO BX802 TERMINAL BOARD
£ TO BF401 FEATURE BOARD
PB
REC

= : FOR CINCH MODELS ONLY
& : FOR MONO/HIFI MODELS W/O DUB ONLY
[: FOR LED MODELS
@ : FOR MONO/HIFI MODELS WITH DUB ONLY
X : FOR MB H71,H72,H73,H66,H60
£ : ONLY FOR SOME MODELS

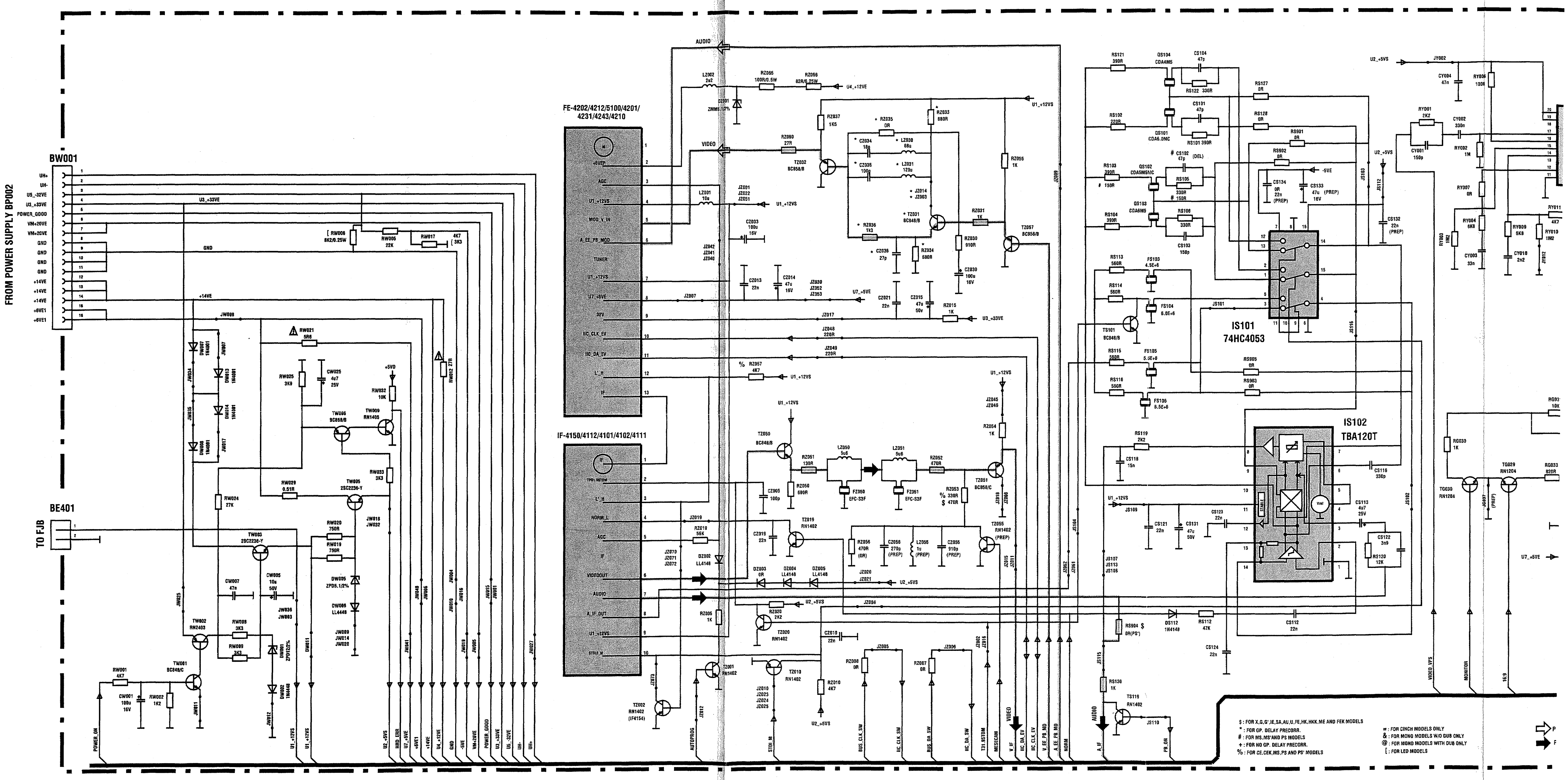
$: FOR MODELS USING IF4160/4160A
* : FOR GP. DELAY PRECORR.
# : FOR IF4151/4151A /4152 ONLY
+ : FOR NO GP. DELAY PRECORR.
% : FOR MODELS USING IF4130/4130A & 4151/4151A

20 49 48 80 MB RFHIFI (Feat.)

Updated 09 / 97

POWER SUPPLY INTERFACE / AUDIO SIGNAL PROCESSING - INTERFACE ALIMENTATION / CIRCUITS AUDIO - NETZEIL INTERFACE / AUDIO SIGNALVERARBEITUNG ALIMENTAZIONE / ELABORAZIONE AUDIO - INTERFAZ ALIMENTACIÓN / TRATAMIENTO AUDIO

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA **(V3450SV - VR6081)**

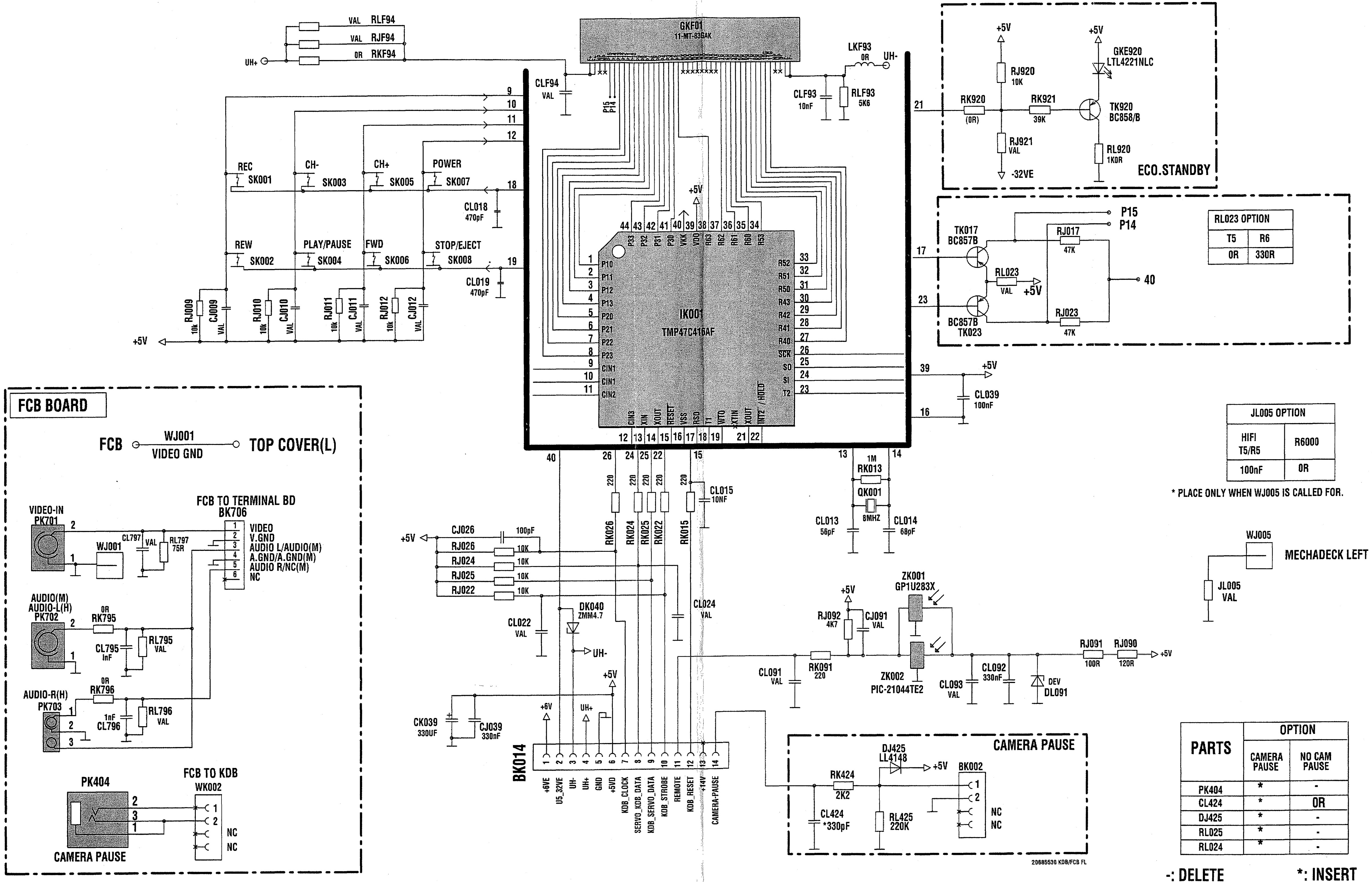

FROM POWER SUPPLY BP002
BW001
UH+
UH-
U5_-32VE
U3_+33VE
POWER_GOOD
VM+20VE
GND
+14VE
+5VE1
TO FJB
BE401
FE-4202/4212/5100/4201/4231/4243/4210
IF-4150/4112/4101/4102/4111
AUDIO
VIDEO
IS101
74HC4053
IS102
TBA120T
TW001 BC848/C
TW002 RN2403
TW003 2SC2236-Y
TW005 2SC2236-Y
TW006 BC858/B
TW009 RN1405
TZ001 RN1402
TZ002 RN1402
TZ010 RN1402
TZ019 RN1402
TZ020 RN1402
TZ031 BC848/B
TZ032 BC858/B
TZ050 BC848/B
TZ051 BC858/C
TZ055 RN1402
TZ057 BC858/B
TS101 BC848/B
TS119 RN1402
TG029 RN1204
TG030 RN1204
FZ050 EFC-S3F
FZ051 EFC-S3F
POWER_ON
U1_+12VS
U2_+5VS
U7_+5VE
+5VE1
U4_+12VE
GND
-5VE
VM+20VE
POWER_GOOD
U3_+33VE
U5_-32VE
UH-
UH+
HRD_ERR
AUTOPROG
STDI_M
BUS_CLK_SW
IIC_CLK_SW
BUS_DA_SW
IIC_DA_SW
T31_SSTDM
MESECAM
V_IF
IIC_DA_EV
IIC_CLK_EV
V_EE_PB_MD
A_EE_PB_MD
NORM
A_IF
PB_ON
VIDEO_VPS
MONITOR
16:9
P
F

$: FOR X,G,G',IE,SA,AU,U,FE,HK,HKK,ME AND FEK MODELS
* : FOR GP. DELAY PRECORR.
# : FOR MS,MS'AND PS MODELS
+ : FOR NO GP. DELAY PRECORR.
% : FOR CE,CEK,MS,PS AND PS' MODELS

= : FOR CINCH MODELS ONLY
& : FOR MONO MODELS W/O DUB ONLY
@ : FOR MONO MODELS WITH DUB ONLY
[: FOR LED MODELS

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (THOMSON: VPH 6750)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


GKF01
11-MT-83GAK
RLF94
RJF94
RKF94
UH+
UH-
LKF93
CLF94
CLF93 10nF
RLF93 5K6
REC SK001
CH- SK003
CH+ SK005
POWER SK007
REW SK002
PLAY/PAUSE SK004
FWD SK006
STOP/EJECT SK008
CL018 470pF
CL019 470pF
RJ009 CJ009
RJ010 CJ010
RJ011 CJ011
RJ012 CJ012
+5V
IK001
TMP47C416AF
ECO.STANDBY
RK920 (0R)
RK921 39K
RJ920 10K
RJ921 VAL
-32VE
GKE920 LTL4221NLC
TK920 BC858/B
RL920 1K0R
P15
P14
TK017 BC857B
RJ017 47K
RL023 VAL
RJ023 47K
BC857B TK023
CL039 100nF
FCB BOARD
FCB
WJ001
VIDEO GND
TOP COVER(L)
FCB TO TERMINAL BD BK706
VIDEO
V.GND
AUDIO L/AUDIO(M)
A.GND/A.GND(M)
AUDIO R/NC(M)
NC
VIDEO-IN PK701
AUDIO(M) AUDIO-L(H) PK702
RK795
RL795
CL795
AUDIO-R(H) PK703
RK796
RL796
CL796
CL797
RL797 75R
PK404
CAMERA PAUSE
FCB TO KDB WK002
CJ026 100pF
RJ026 10K
RJ024 10K
RJ025 10K
RJ022 10K
RK026
RK024
RK025
RK022
RK015
CL015 10NF
CL022 VAL
CL024 VAL
DK040 ZMM4.7
CK039 330UF
CJ039 330nF
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
RK013 1M
QK001 8MHZ
CL013 56pF
CL014 68pF
ZK001 GP1U283X
RJ092 4K7
CJ091 VAL
RK091 220
CL091 VAL
ZK002 PIC-21044TE2
CL093 VAL
CL092 330nF
DL091 DEV
RJ091 100R
RJ090 120R
DJ425 LL4148
RK424 2K2
CL424 *330pF
RL425 220K
BK002
WJ005
MECHADECK LEFT
JL005 VAL
20685530 KDB/FCS FL

RL023 OPTION	
T5	R6
0R	330R

JL005 OPTION	
HIFI T5/R5	R6000
100nF	0R

* PLACE ONLY WHEN WJ005 IS CALLED FOR.

PARTS	OPTION	
	CAMERA PAUSE	NO CAM PAUSE
PK404	*	-
CL424	*	0R
DJ425	*	-
RL025	*	-
RL024	*	-

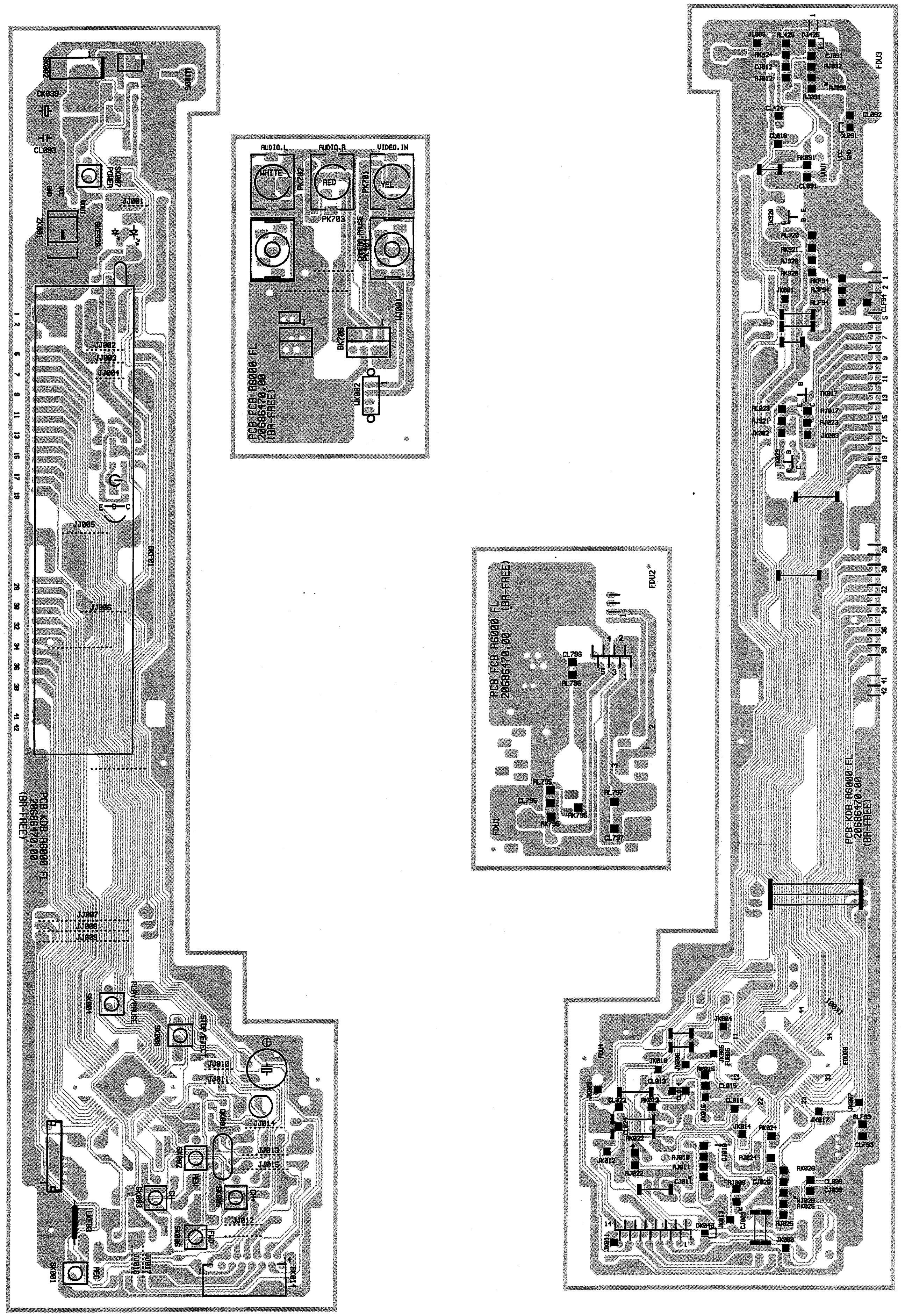
-: DELETE *: INSERT

TOCOM	DESCRIPTION	CAM.PAUSE	FAV	S/W	ECO	SK001-SK008	MODELS
20685500	ASY KDB/FCB R6 FL1/FL1	YES	2	R6-R1T	YES	HIFI/MONO	VP2750,VP4750
20729530	ASY KDB/FCB R6 FL2/FL2	YES	3	R6-R1T	NO	HIFI/MONO	VPH6750
20723090	EQU KDB R6 FL3	NO	NO	R6-R1T	YES	HIFI/MONO	VP2701,VP4701,V2700,V4700

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(THOMSON : VPH 6750)**

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

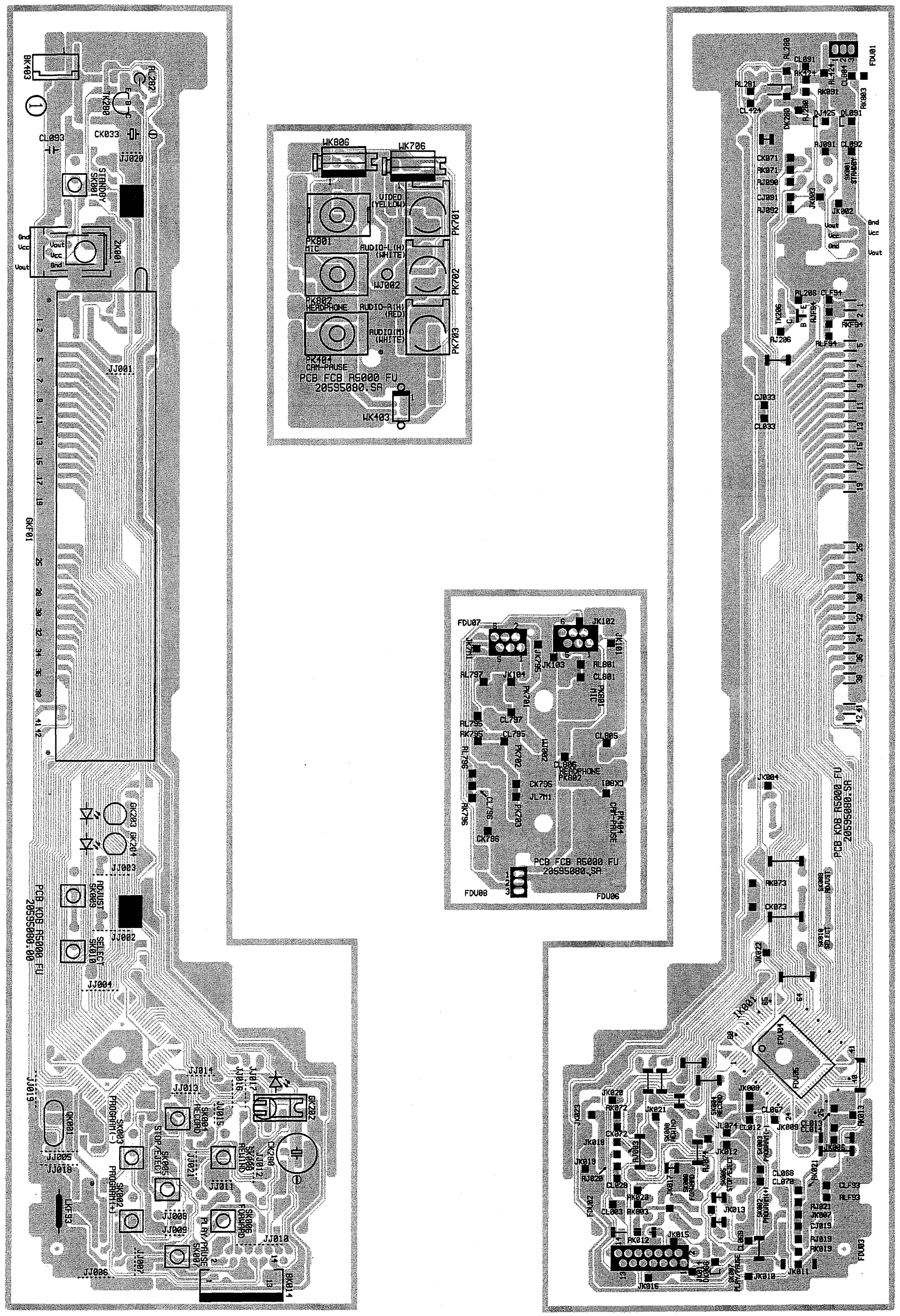
Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre


AUDIO.L
AUDIO.R
VIDEO.IN
WHITE
RED
YEL.
PK701
PK702
PK703
WK802
PCB FCB R6000 FL
20686470.00
(BR-FREE)
PCB KDB R6000 FL
20686470.00
(BR-FREE)
FDU1
FDU2
FDU3

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(TELEFUNKEN : M 9680 HIFI)**

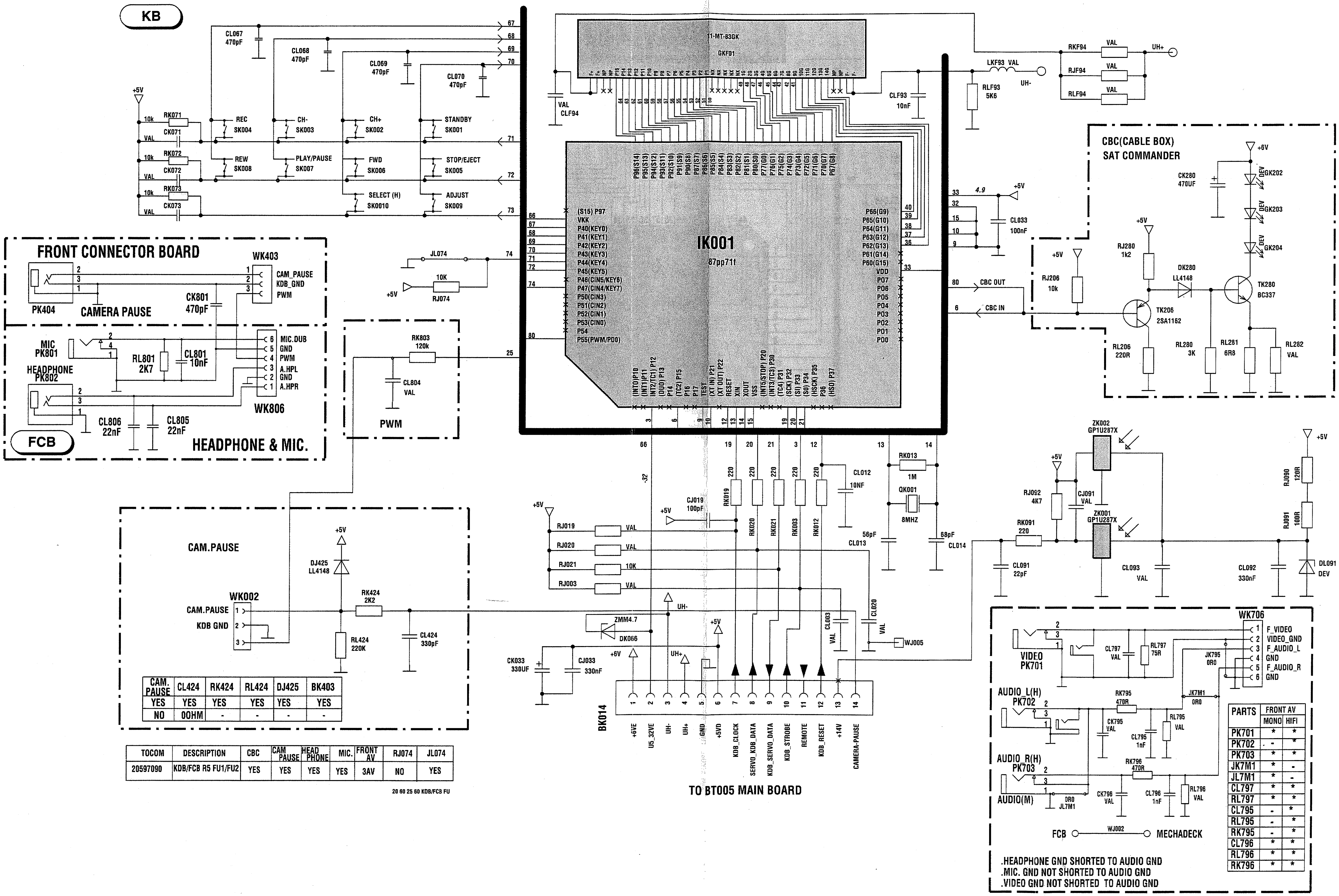
Component side -Côté composants - Bestückungsseite - Lato componenti - Lado

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre


WK806
WK706
VIDEO (YELLOW)
PK801 MIC
AUDIO-L(H) (WHITE)
WJ002
PK802 HEADPHONE
AUDIO-R(H) (RED)
AUDIO(M) (WHITE)
PK404 CAM-PAUSE
PK701
PK702
PK703
PCB FCB R6000 FU
20595080.SA
WK403
FDU07
JK102
FDU08
FDU06
PCB FCB R6000 FU
20595080.SA
PCB KDB R6000 FU
20595080.SA
STANDBY
ADJUST
SELECT
FDU01

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (TELEFUNKEN: M 9680 HIFI)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


KB
FCB
IK001
87pp71f
11-MT-83GK
GKF01
FRONT CONNECTOR BOARD
WK403
CAM_PAUSE
KDB_GND
PWM
PK404
CAMERA PAUSE
CK801
470pF
MIC
PK801
HEADPHONE
PK802
RL801
2K7
CL801
10nF
WK806
MIC.DUB
GND
PWM
A.HPL
GND
A.HPR
CL806
22nF
CL805
22nF
HEADPHONE & MIC.
PWM
RK803
120k
CL804
VAL
JL074
10K
RJ074
+5V
REC
SK004
CH-
SK003
CH+
SK002
STANDBY
SK001
REW
SK008
PLAY/PAUSE
SK007
FWD
SK006
STOP/EJECT
SK005
SELECT (H)
SK0010
ADJUST
SK009
CL067
470pF
CL068
470pF
CL069
470pF
CL070
470pF
CBC(CABLE BOX)
SAT COMMANDER
CBC OUT
CBC IN
TK206
2SA1162
TK280
BC337
DK280
LL4148
CK280
470UF
GK202
GK203
GK204
RKF94
RJF94
RLF94
LKF93
RLF93
5K6
CLF93
10nF
CLF94
UH+
UH-
CL033
100nF
ZK002
GP1U287X
ZK001
GP1U287X
RK013
1M
QK001
8MHZ
CL013
CL014
CL012
10nF
CJ019
100pF
RJ019
RJ020
RJ021
RJ003
RK019
RK020
RK021
RK003
RK012
ZMM4.7
DK066
CK033
330UF
CJ033
330nF
WJ005
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
TO BT005 MAIN BOARD
CAM.PAUSE
WK002
CAM.PAUSE
KDB GND
DJ425
LL4148
RK424
2K2
RL424
220K
CL424
330pF
WK706
F_VIDEO
VIDEO_GND
F_AUDIO_L
GND
F_AUDIO_R
GND
VIDEO
PK701
AUDIO_L(H)
PK702
AUDIO_R(H)
PK703
AUDIO(M)
CL797
RL797
75R
JK795
0R0
JK7M1
RK795
470R
RK796
470R
CK795
CL795
1nF
RL795
CK796
CL796
1nF
RL796
JL7M1
FCB
WJ002
MECHADECK
RJ090
120R
RJ091
100R
DL091
CL092
330nF
CL093
CL091
22pF
RK091
220
RJ092
4K7
CJ091
.HEADPHONE GND SHORTED TO AUDIO GND
.MIC. GND NOT SHORTED TO AUDIO GND
.VIDEO GND NOT SHORTED TO AUDIO GND
20 60 25 60 KDB/FCB FU

CAM. PAUSE	CL424	RK424	RL424	DJ425	BK403
YES	YES	YES	YES	YES	YES
NO	0OHM	-	-	-	-

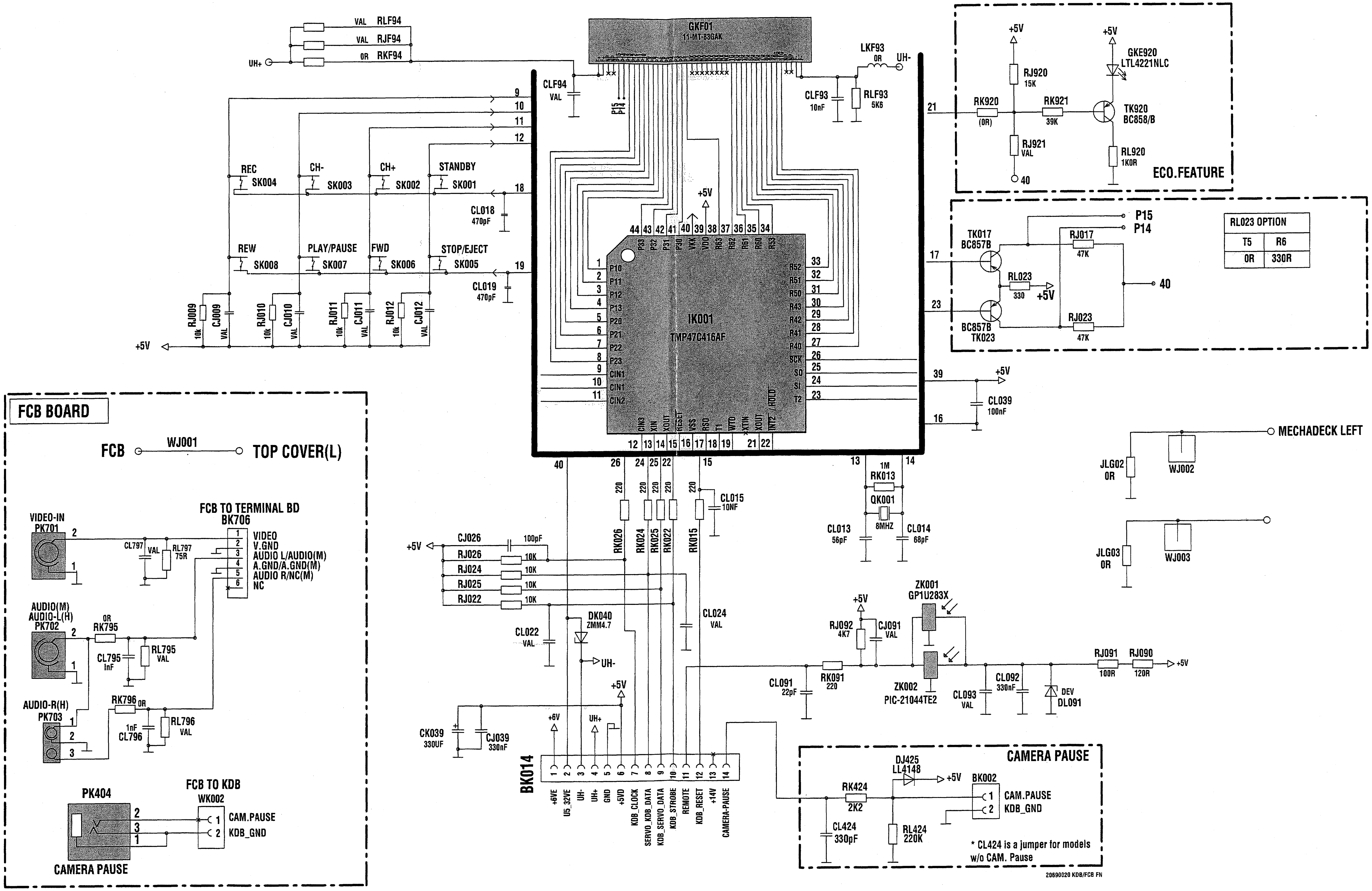
TOCOM	DESCRIPTION	CBC	CAM PAUSE	HEAD PHONE	MIC.	FRONT AV	RJ074	JL074
20597090	KDB/FCB R5 FU1/FU2	YES	YES	YES	YES	3AV	NO	YES

20 60 25 60 KDB/FCB FU

PARTS	FRONT AV	
	MONO	HIFI
PK701	*	*
PK702	-	*
PK703	*	*
JK7M1	*	-
JL7M1	*	-
CL797	*	*
RL797	*	*
CL795	-	*
RL795	-	*
RK795	-	*
CL796	*	*
RL796	*	*
RK796	*	*

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (SABA: VR 8087)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

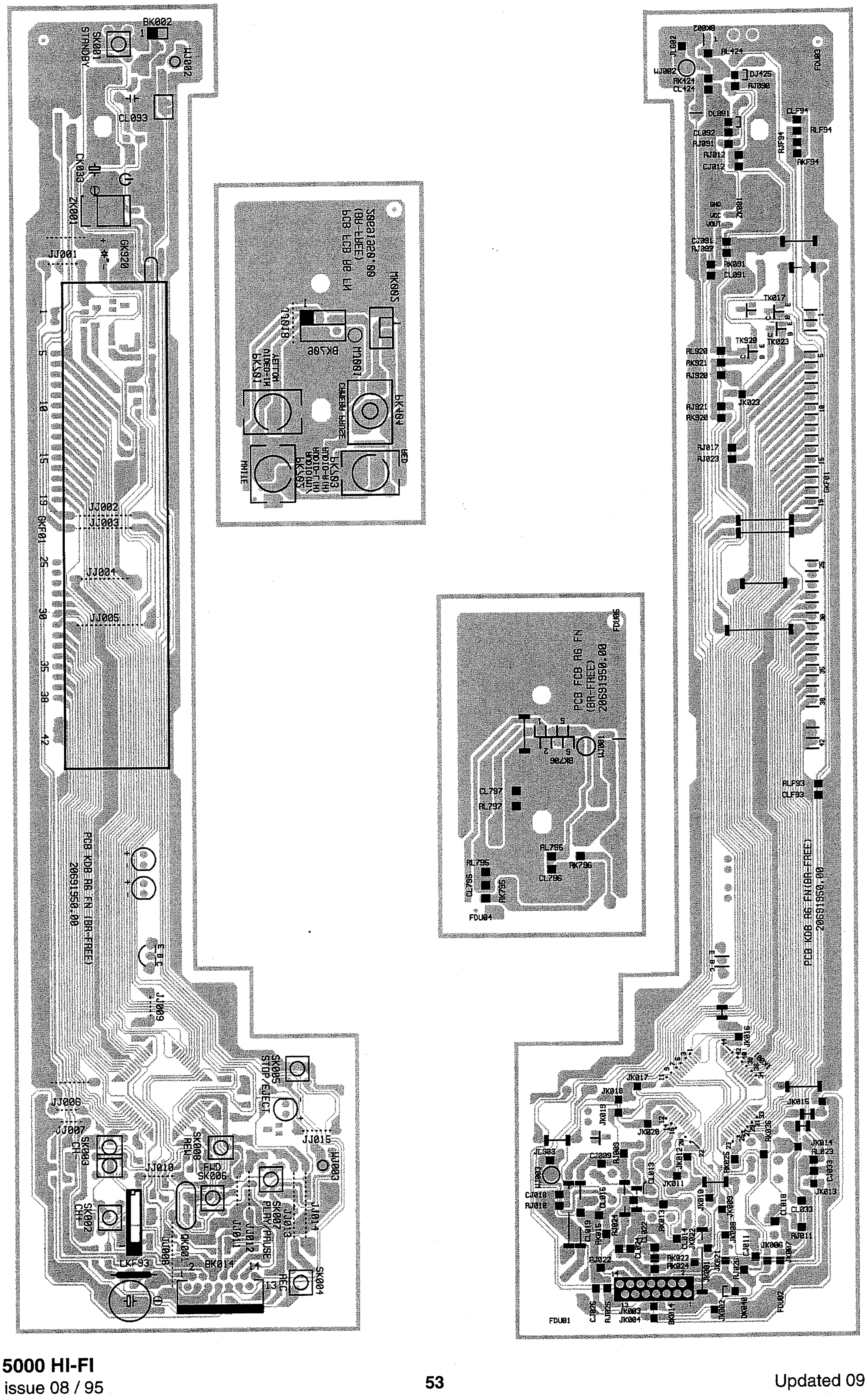

GKF01
11-MT-83GAK
RLF94
RJF94
RKF94
VAL
OR
UH+
UH-
LKF93
CLF94
CLF93 10nF
RLF93 5K6
P15
P14
REC
SK004
CH-
SK003
CH+
SK002
STANDBY
SK001
CL018 470pF
REW
SK008
PLAY/PAUSE
SK007
FWD
SK006
STOP/EJECT
SK005
CL019 470pF
RJ009 10k
CJ009
RJ010 10k
CJ010
RJ011 10k
CJ011
RJ012 10k
CJ012
+5V
IK001
TMP47C416AF
P10
P11
P12
P13
P20
P21
P22
P23
CIN1
CIN1
CIN2
P33
P32
P31
P30
VKK
VDD
R63
R62
R61
R60
R53
R52
R51
R50
R43
R42
R41
R40
SCK
SO
SI
T2
CIN3
XIN
XOUT
RESET
VSS
RSO
T1
WTO
XTIN
XTOUT
INT2
HOLD
ECO.FEATURE
RJ920 15K
RK920 (0R)
RK921 39K
RJ921 VAL
GKE920
LTL4221NLC
TK920
BC858/B
RL920 1K0R
TK017
BC857B
RJ017 47K
RL023 330
RJ023 47K
BC857B
TK023
RL023 OPTION
T5
R6
0R
330R
CL039 100nF
MECHADECK LEFT
JLG02 0R
WJ002
JLG03 0R
WJ003
FCB BOARD
FCB
WJ001
TOP COVER(L)
FCB TO TERMINAL BD
BK706
VIDEO
V.GND
AUDIO L/AUDIO(M)
A.GND/A.GND(M)
AUDIO R/NC(M)
NC
VIDEO-IN
PK701
CL797
RL797 75R
AUDIO(M)
AUDIO-L(H)
PK702
RK795 0R
CL795 1nF
RL795 VAL
AUDIO-R(H)
PK703
RK796 0R
CL796 1nF
RL796 VAL
PK404
FCB TO KDB
WK002
CAM.PAUSE
KDB_GND
CAMERA PAUSE
CJ026 100pF
RJ026 10K
RJ024 10K
RJ025 10K
RJ022 10K
RK026 220
RK024 220
RK025 220
RK022 220
RK015 220
CL015 10NF
CL022 VAL
DK040 ZMM4.7
CL024 VAL
CK039 330UF
CJ039 330nF
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
RK013 1M
QK001 8MHZ
CL013 56pF
CL014 68pF
ZK001
GP1U283X
RJ092 4K7
CJ091 VAL
ZK002
PIC-21044TE2
RK091 220
CL091 22pF
CL093 VAL
CL092 330nF
DL091 DEV
RJ091 100R
RJ090 120R
DJ425
LL4148
RK424 2K2
CL424 330pF
RL424 220K
BK002
CAM.PAUSE
KDB_GND
* CL424 is a jumper for models w/o CAM. Pause
20690020 KDB/FCB FN

TOCOM	DESCRIPTION	CAM.PAUSE	FAV	MODEL	ECO	RL023	WJ002	JLG02	TOOL
20699840	EQU KDB R6 FN1	NO	NO	T5000	NO	0R	NO	NO	97-3B
20734180	EQU KDB R6 FN2	NO	NO	R6000	YES	330R	YES	YES	97-3B

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(SABA: VR8087)**

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

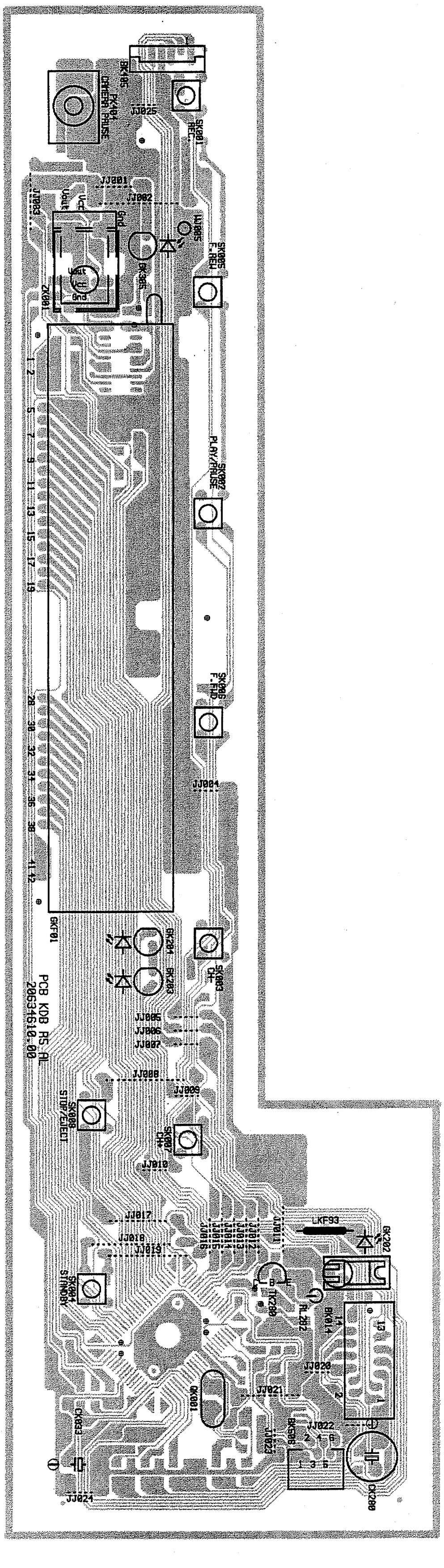
Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre



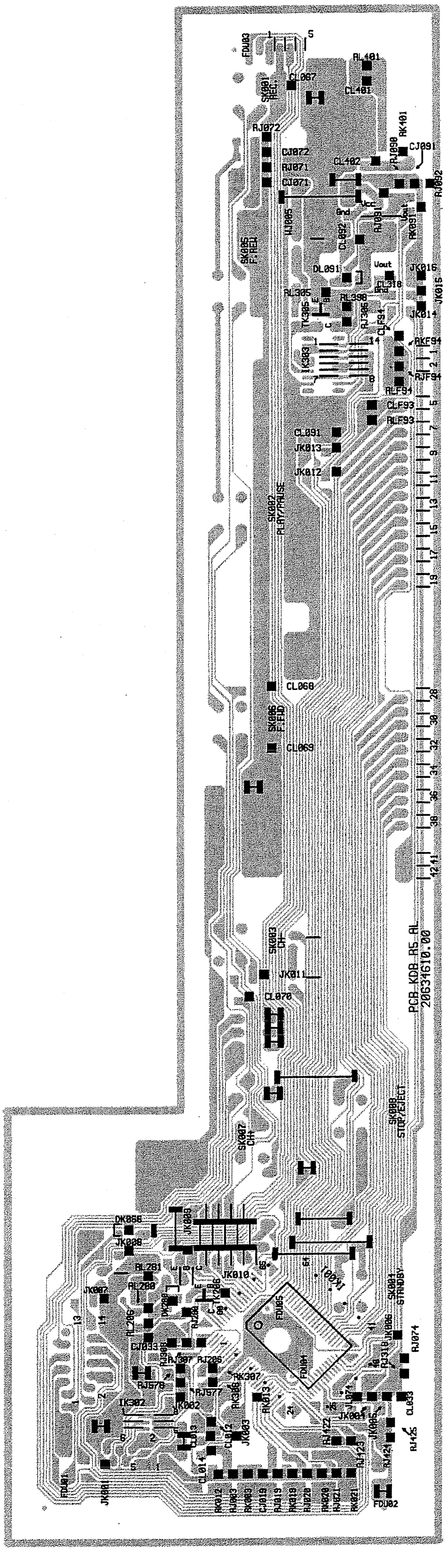
BK002
SK001
STANDBY
WJ002
CL093
CK030
ZK001
GK920
JJ001
JJ002
JJ003
GKF01
JJ004
JJ005
PCB KDB R6 FN (BR-FREE)
20691950.00
JJ009
JJ006
JJ007
SK003
CH-
SK002
CH+
LKF93
SK005
STOP/EJECT
SK008
REW
JJ015
WJ003
JJ010
FWD
SK006
SK007
PLAY/PAUSE
JJ013
JJ014
WK001
BK014
SK004
REC
PCB FCB R6 FN
(BR-FREE)
20691920.00
MK002
BK706
BK703
BK704
BK705
RED
WHITE
VIDEO-IN
AUDIO-IN
FDU06
FDU04
CL797
RL797
RL796
RK796
CL796
RL795
CL795
RK795
FDU01
FDU02
PCB KDB R6 FN(BR-FREE)
20691950.00

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(NORMENDE : V 3450 SV)**

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

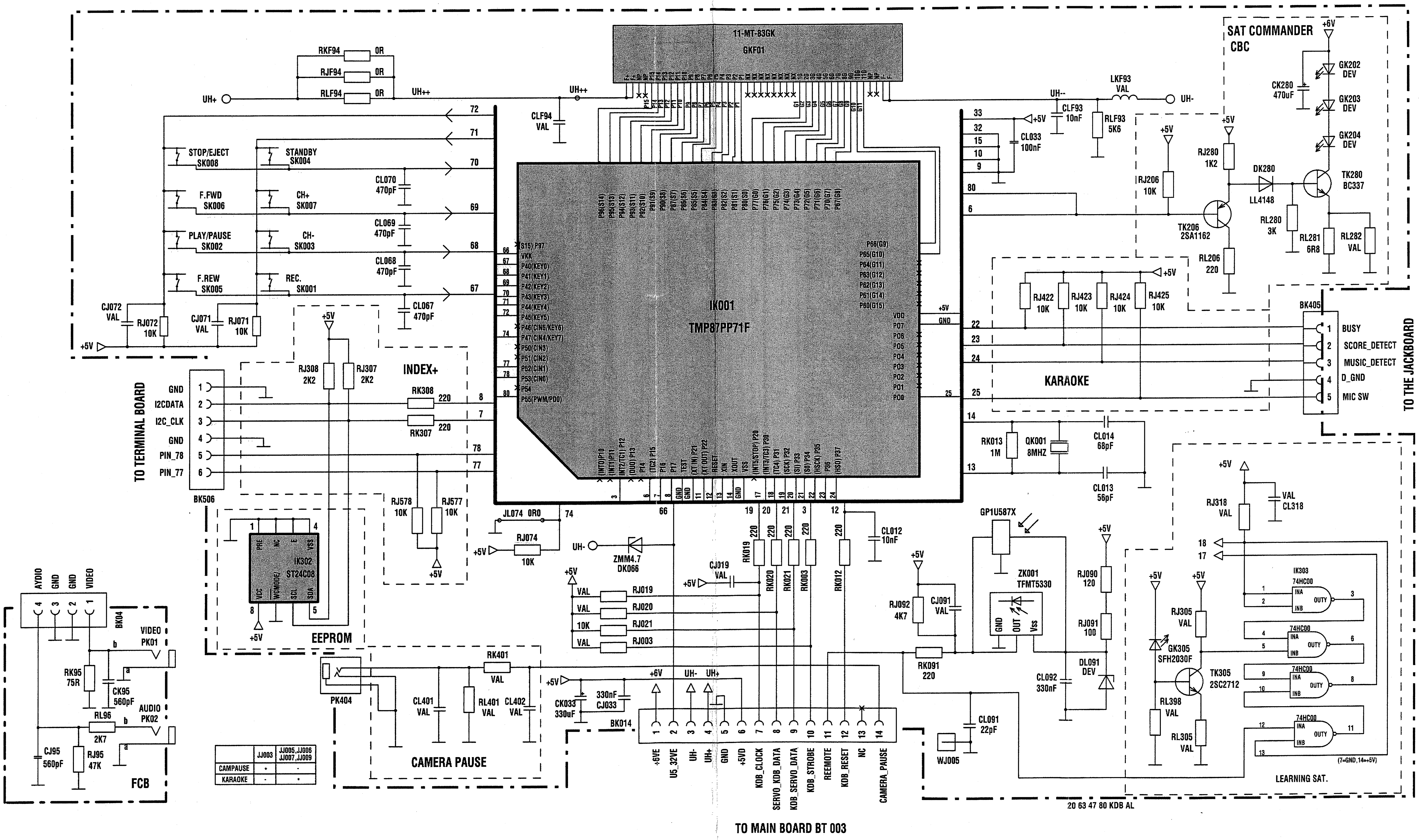

SK001 REC.
SK005 F.REW
SK002 PLAY/PAUSE
SK006 F.FWD
SK003 CH-
SK008 STOP/EJECT
SK007 CH+
SK004 STANDBY
LKF93
PCB KDB R5 AL
20634610.00

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre


SK001 REC.
SK005 F.REW
SK002 PLAY/PAUSE
SK006 F.FWD
SK003 CH-
SK008 STOP/EJECT
SK007 CH+
SK004 STANDBY
PCB KDB R5 AL
20634610.00

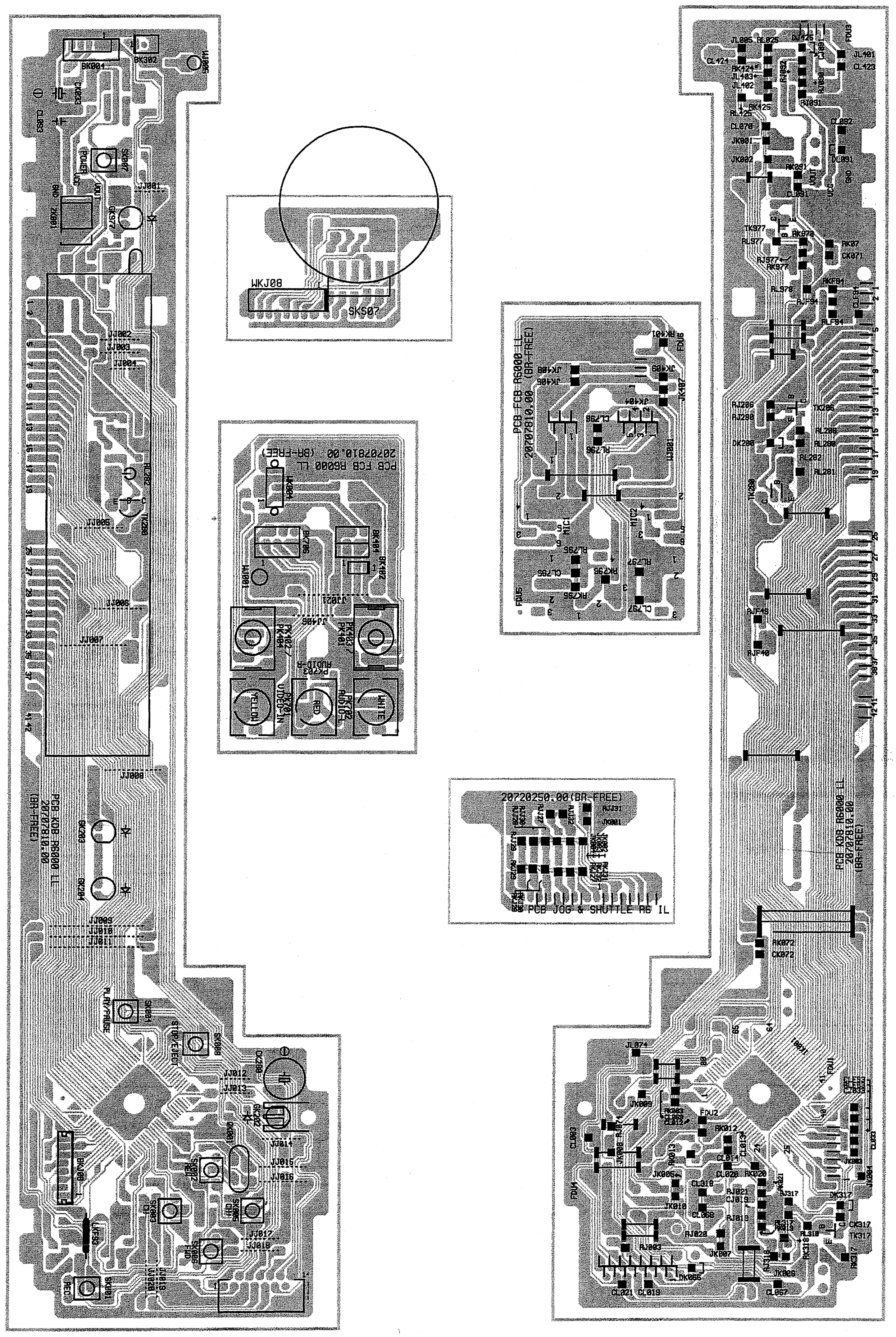
KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (NORMENDE: V 3450 SV)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


11-MT-83GK
GKF01
RKF94 0R
RJF94 0R
RLF94 0R
UH+
UH++
CLF94 VAL
STOP/EJECT SK008
STANDBY SK004
F.FWD SK006
CH+ SK007
PLAY/PAUSE SK002
CH- SK003
F.REW SK005
REC. SK001
CL070 470pF
CL069 470pF
CL068 470pF
CL067 470pF
CJ072 VAL
RJ072 10K
CJ071 VAL
RJ071 10K
+5V
IK001
TMP87PP71F
INDEX+
RJ308 2K2
RJ307 2K2
RK308 220
RK307 220
TO TERMINAL BOARD
GND
I2CDATA
I2C_CLK
GND
PIN_78
PIN_77
BK506
RJ578 10K
RJ577 10K
JL074 0R0
RJ074 10K
IK302
ST24C08
EEPROM
UH-
ZMM4.7 DK066
CJ019 VAL
RJ019
RJ020
RJ021
RJ003
VAL
10K
RK019
RK020
RK021
RK003
RK012
CL012 10nF
AYDIO
GND
GND
VIDEO
BK04
VIDEO PK01
RK95 75R
CK95 560pF
AUDIO PK02
RL96 2K7
CJ95 560pF
RJ95 47K
FCB
PK404
RK401 VAL
CL401 VAL
RL401 VAL
CL402 VAL
CK033 330uF
CJ033 330nF
CAMERA PAUSE
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REEMOTE
KDB_RESET
NC
CAMERA_PAUSE
TO MAIN BOARD BT 003
LKF93 VAL
UH--
CLF93 10nF
RLF93 5K6
CL033 100nF
SAT COMMANDER CBC
CK280 470uF
GK202 DEV
GK203 DEV
GK204 DEV
TK280 BC337
RJ280 1K2
DK280 LL4148
RL280 3K
RL281 6R8
RL282 VAL
RJ206 10K
TK206 2SA1162
RL206 220
RJ422 10K
RJ423 10K
RJ424 10K
RJ425 10K
KARAOKE
BK405
BUSY
SCORE_DETECT
MUSIC_DETECT
D_GND
MIC SW
TO THE JACKBOARD
RK013 1M
QK001 8MHZ
CL014 68pF
CL013 56pF
GP1U587X
ZK001 TFMT5330
RJ092 4K7
CJ091 VAL
RK091 220
CL091 22pF
WJ005
RJ090 120
RJ091 100
DL091 DEV
CL092 330nF
RJ318 VAL
CL318 VAL
RJ305 VAL
GK305 SFH2030F
TK305 2SC2712
RL398 VAL
RL305 VAL
IK303 74HC00
(7=GND,14=+5V)
LEARNING SAT.
20 63 47 80 KDB AL

	JJ003	JJ005,JJ006 JJ007,JJ009
CAMPAUSE	•	-
KARAOKE	-	•

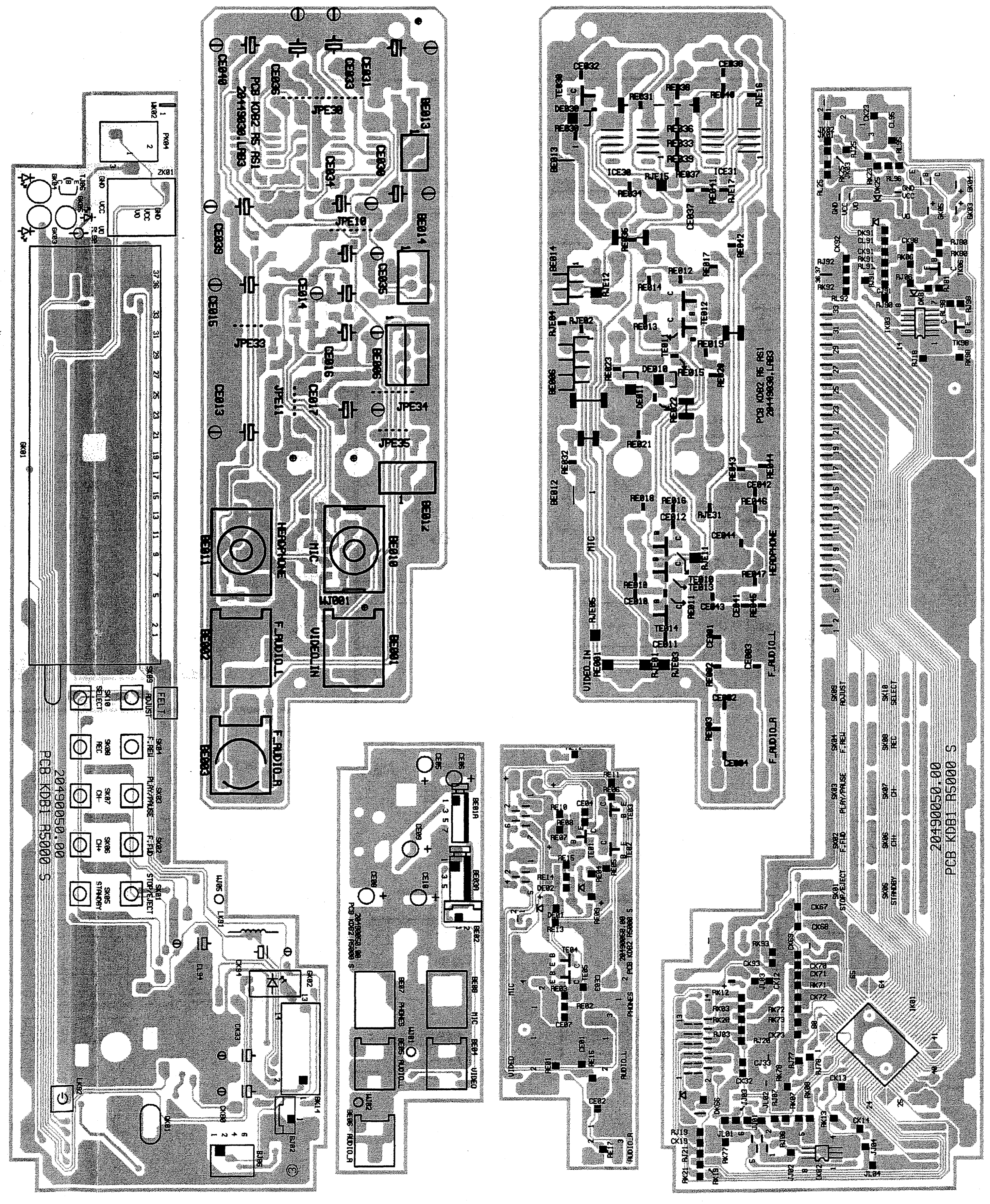
KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(THOMSON : VPH 6751)**


PCB KDB R6000 LL
20707810.00
(BR-FREE)
PCB FCB R6000 LL
20707810.00 (BR-FREE)
20720250.00(BR-FREE)
PCB JOG & SHUTTLE R6 IL
WKJ08
SK07
YELLOW
RED
WHITE
PLAY/PAUSE
STOP/EJECT

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(TELEFUNKEN : M 9571 HIFI)**

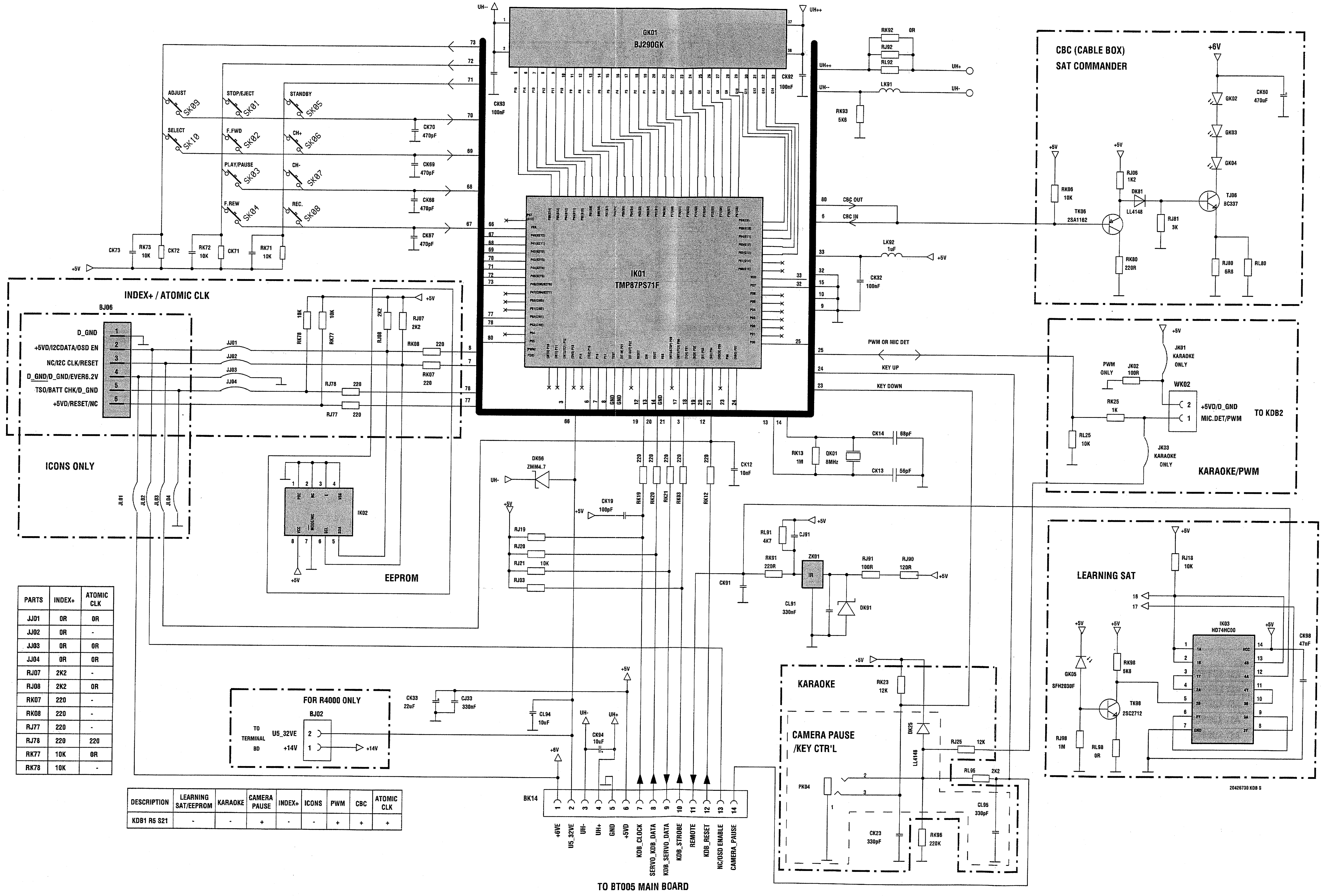

PCB KDB1 R5000 S
20490050.00
PCB KDB2 R5 RS1
20419030.LRB3
HEADPHONE
MIC
VIDEO.IN
F.AUDIO.L
F.AUDIO.R
SELECT
ADJUST
F.REV
REC
PLAY/PAUSE
CH-
F.FWD
CH+
STOP/EJECT
STANDBY
PHONES
AUDIO.L
AUDIO.R
VIDEO

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (TELEFUNKEN: M 9571 HIFI)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

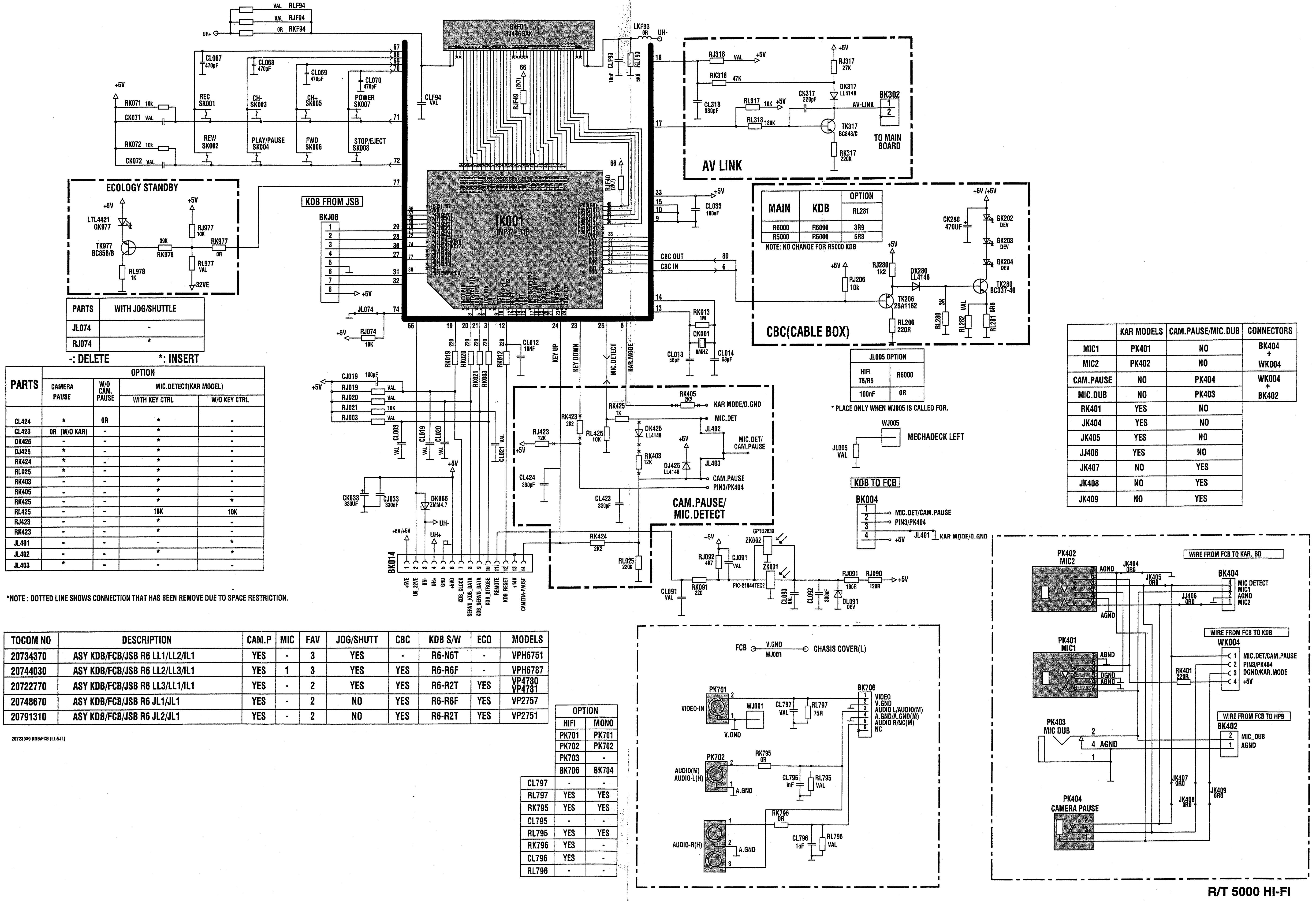

GK01
BJ290GK
IK01
TMP87PS71F
IK02
IK03
HD74HC00
ADJUST SK09
STOP/EJECT SK01
STANDBY SK05
SELECT SK10
F.FWD SK02
CH+ SK06
PLAY/PAUSE SK03
CH- SK07
F.REW SK04
REC. SK08
INDEX+ / ATOMIC CLK
BJ06
D_GND
+5VD/I2CDATA/OSD EN
NC/I2C CLK/RESET
D_GND/D_GND/EVER6.2V
TSO/BATT CHK/D_GND
+5VD/RESET/NC
ICONS ONLY
EEPROM
CBC (CABLE BOX)
SAT COMMANDER
KARAOKE/PWM
TO KDB2
PWM OR MIC DET
KEY UP
KEY DOWN
CBC OUT
CBC IN
LEARNING SAT
KARAOKE
CAMERA PAUSE
/KEY CTR'L
FOR R4000 ONLY
BJ02
TO TERMINAL BD
U5_32VE
+14V
BK14
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
NC/OSD ENABLE
CAMERA_PAUSE
TO BT005 MAIN BOARD
20426730 KDB S

PARTS	INDEX+	ATOMIC CLK
JJ01	0R	0R
JJ02	0R	-
JJ03	0R	0R
JJ04	0R	0R
RJ07	2K2	-
RJ08	2K2	0R
RK07	220	-
RK08	220	-
RJ77	220	-
RJ78	220	220
RK77	10K	0R
RK78	10K	-

DESCRIPTION	LEARNING SAT/EEPROM	KARAOKE	CAMERA PAUSE	INDEX+	ICONS	PWM	CBC	ATOMIC CLK
KDB1 R5 S21	-	-	+	-	-	+	+	+

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (THOMSON: VPH 6751)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


GKF01
BJ446GAK
IK001
TMP87_71F
REC SK001
CH- SK003
CH+ SK005
POWER SK007
REW SK002
PLAY/PAUSE SK004
FWD SK006
STOP/EJECT SK008
ECOLOGY STANDBY
LTL4421 GK977
TK977 BC858/B
RK978
RJ977 10K
RK977 0R
RL977 VAL
RL978 1K
32VE
KDB FROM JSB
BKJ08
AV LINK
BK302
TO MAIN BOARD
TK317 BC848/C
CBC(CABLE BOX)
CBC OUT
CBC IN
TK206 2SA1162
TK280 BC337-40
DK280 LL4148
GK202 DEV
GK203 DEV
GK204 DEV
CK280 470UF
+6V /+5V
QK001 8MHZ
KEY UP
KEY DOWN
MIC.DETECT
KAR.MODE
CAM.PAUSE/ MIC.DETECT
KAR MODE/D.GND
MIC.DET
MIC.DET/ CAM.PAUSE
CAM.PAUSE PIN3/PK404
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
ZK002
ZK001
PIC-21044TEC2
GP1U283X
WJ005
MECHADECK LEFT
JL005 VAL
KDB TO FCB
BK004
MIC.DET/CAM.PAUSE
PIN3/PK404
KAR MODE/D.GND
FCB
V.GND WJ001
CHASIS COVER(L)
PK701 VIDEO-IN
PK702 AUDIO(M) AUDIO-L(H)
AUDIO-R(H)
BK706
VIDEO
V.GND
AUDIO L/AUDIO(M)
A.GND/A.GND(M)
AUDIO R/NC(M)
NC
PK402 MIC2
PK401 MIC1
PK403 MIC DUB
PK404 CAMERA PAUSE
WIRE FROM FCB TO KAR. BD
BK404
MIC DETECT
MIC1
AGND
MIC2
WIRE FROM FCB TO KDB
WK004
MIC.DET/CAM.PAUSE
PIN3/PK404
DGND/KAR.MODE
+5V
WIRE FROM FCB TO HPB
BK402
MIC_DUB
AGND

PARTS	WITH JOG/SHUTTLE
JL074	-
RJ074	*

-: DELETE *: INSERT

PARTS	OPTION			
	CAMERA PAUSE	W/O CAM. PAUSE	MIC.DETECT(KAR MODEL)	
			WITH KEY CTRL	W/O KEY CTRL
CL424	*	0R	*	-
CL423	0R (W/O KAR)	-	*	-
DK425	-	-	*	-
DJ425	*	-	*	-
RK424	*	-	*	-
RL025	*	-	*	-
RK403	-	-	*	-
RK405	-	-	*	-
RK425	-	-	*	*
RL425	-	-	10K	10K
RJ423	-	-	*	-
RK423	-	-	*	-
JL401	-	-	-	*
JL402	-	-	*	*
JL403	*	-	-	-

*NOTE : DOTTED LINE SHOWS CONNECTION THAT HAS BEEN REMOVE DUE TO SPACE RESTRICTION.

MAIN	KDB	OPTION RL281
R6000	R6000	3R9
R5000	R6000	6R8

NOTE: NO CHANGE FOR R5000 KDB

JL005 OPTION	
HIFI T5/R5	R6000
100nF	0R

* PLACE ONLY WHEN WJ005 IS CALLED FOR.

	KAR MODELS	CAM.PAUSE/MIC.DUB	CONNECTORS
MIC1	PK401	NO	BK404 + WK004
MIC2	PK402	NO	
CAM.PAUSE	NO	PK404	WK004 + BK402
MIC.DUB	NO	PK403	
RK401	YES	NO	
JK404	YES	NO	
JK405	YES	NO	
JJ406	YES	NO	
JK407	NO	YES	
JK408	NO	YES	
JK409	NO	YES	

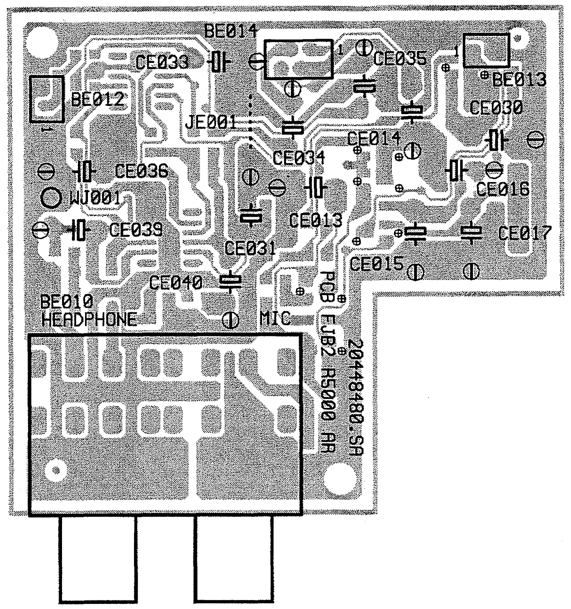
TOCOM NO	DESCRIPTION	CAM.P	MIC	FAV	JOG/SHUTT	CBC	KDB S/W	ECO	MODELS
20734370	ASY KDB/FCB/JSB R6 LL1/LL2/IL1	YES	-	3	YES	-	R6-N6T	-	VPH6751
20744030	ASY KDB/FCB/JSB R6 LL2/LL3/IL1	YES	1	3	YES	YES	R6-R6F	-	VPH6787
20722770	ASY KDB/FCB/JSB R6 LL3/LL1/IL1	YES	-	2	YES	YES	R6-R2T	YES	VP4780 VP4781
20748670	ASY KDB/FCB/JSB R6 JL1/JL1	YES	-	2	NO	YES	R6-R6F	YES	VP2757
20791310	ASY KDB/FCB/JSB R6 JL2/JL1	YES	-	2	NO	YES	R6-R2T	YES	VP2751

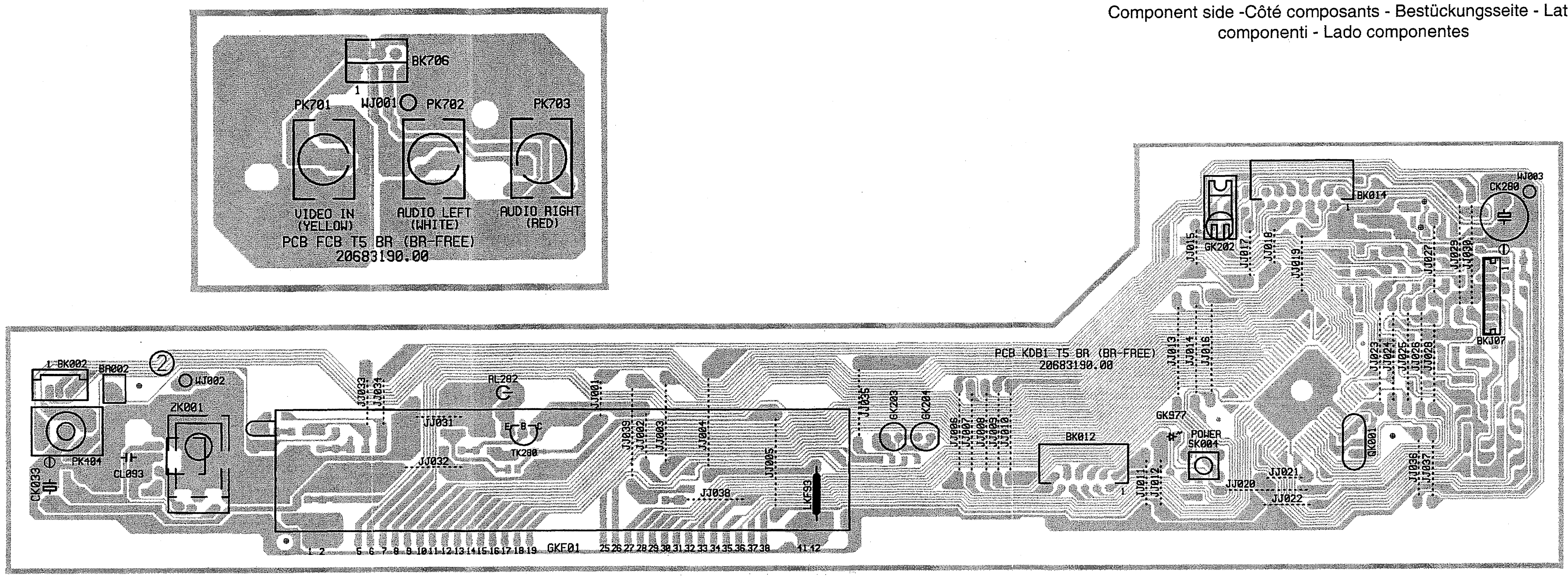
20723930 KDB/FCB (LL&JL)

	OPTION	
	HIFI	MONO
	PK701	PK701
	PK702	PK702
	PK703	-
	BK706	BK704
CL797	-	-
RL797	YES	YES
RK795	YES	YES
CL795	-	-
RL795	YES	YES
RK796	YES	-
CL796	YES	-
RL796	-	-

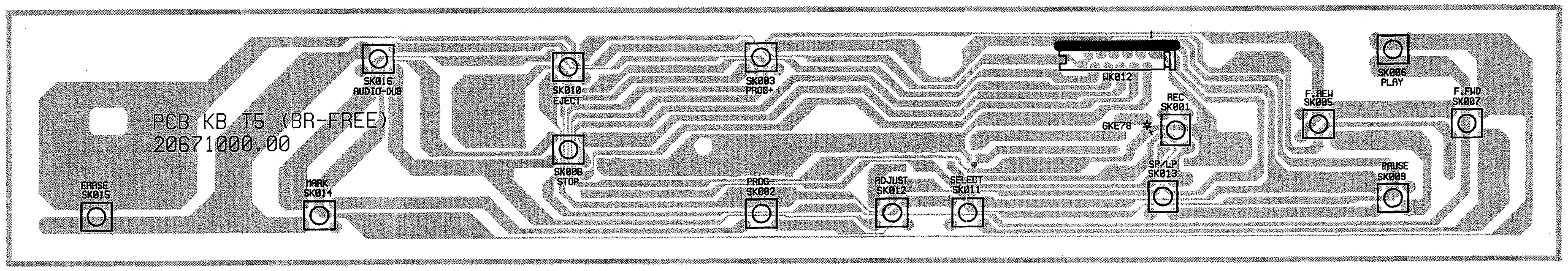
KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(THOMSON : VPH 6780 - VPH 6790)**

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

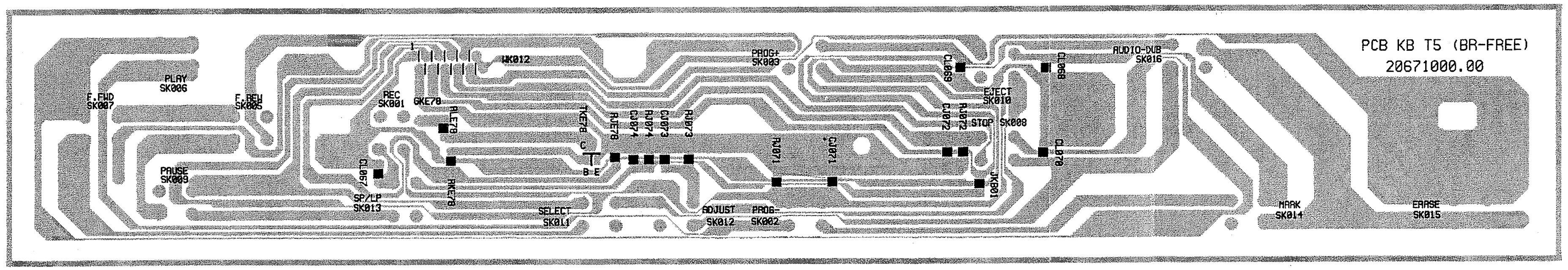

BE014
CE033
CE035
BE013
BE012
CE030
JE001
CE014
CE034
CE036
WJ001
CE016
CE013
CE039
CE017
CE031
CE015
CE040
BE010
HEADPHONE
MIC
PCB FJB2 R5000 AA
20448480.SA

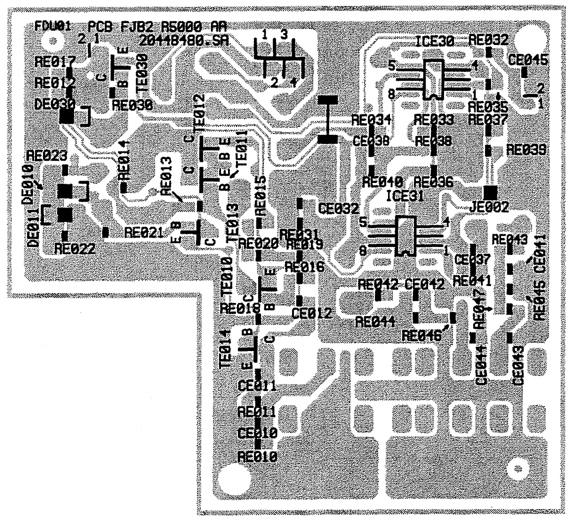

BK706
PK701
WJ001
PK702
PK703
VIDEO IN
(YELLOW)
AUDIO LEFT
(WHITE)
AUDIO RIGHT
(RED)
PCB FCB T5 BR (BR-FREE)
20683190.00

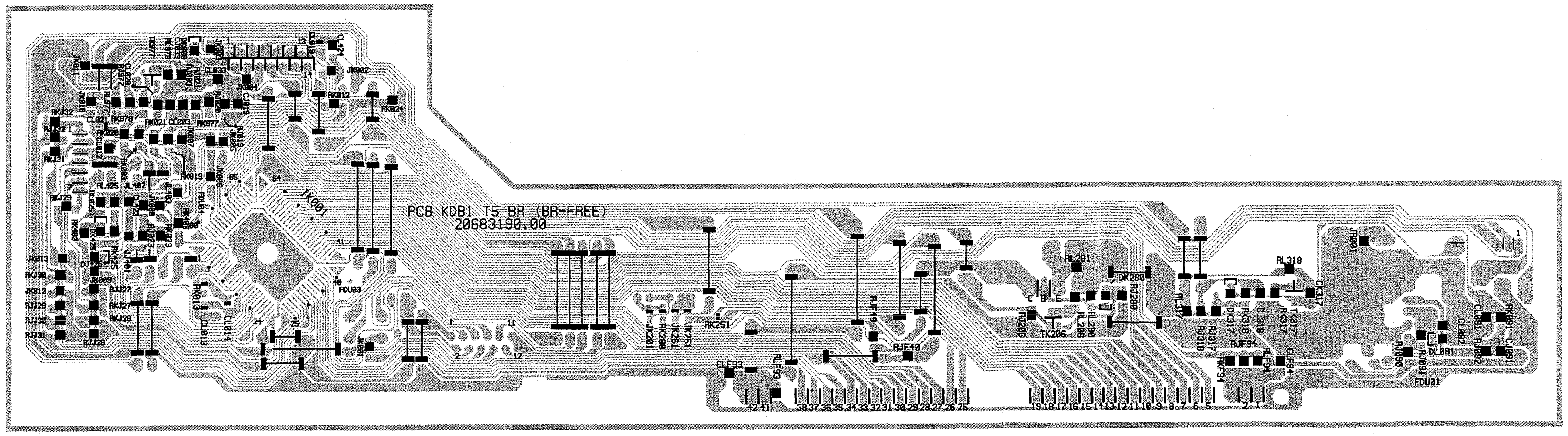
BK002
BA002
WJ002
ZK001
PK404
CL093
RL202
JJ031
TK200
JJ032
JJ038
BK012
GK977
POWER
SK004
JJ020
JJ021
JJ022
BK014
CK200
WJ003
GK202
BK107
PCB KDB1 T5 BR (BR-FREE)
20683190.00
GKE01

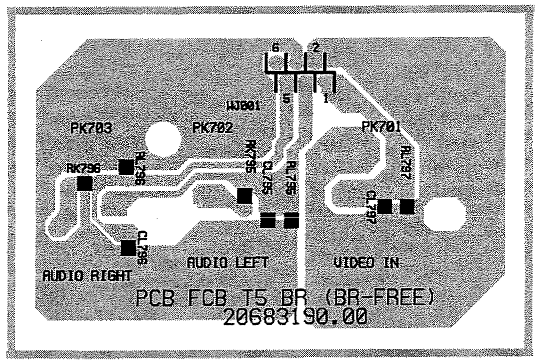

PCB KB T5 (BR-FREE)
20671000.00
SK016
AUDIO-DUB
SK010
EJECT
SK003
PROG+
WK012
SK006
PLAY
F.REW
SK005
F.FWD
SK007
REC
SK001
GKE78
SK008
STOP
SP/LP
SK013
PAUSE
SK009
ERASE
SK015
MARK
SK014
PROG-
SK002
ADJUST
SK012
SELECT
SK011

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre


PCB KB T5 (BR-FREE)
20671000.00
F.FWD
SK007
PLAY
SK006
F.REW
SK005
REC
SK001
GKE78
WK012
PROG+
SK003
AUDIO-DUB
SK016
EJECT
SK010
STOP
SK008
PAUSE
SK009
SP/LP
SK013
SELECT
SK011
ADJUST
SK012
PROG-
SK002
MARK
SK014
ERASE
SK015


FDU01
PCB FJB2 R5000 AA
20448480.SA
ICE30
RE032
CE045
RE017
RE012
DE030
RE030
TE030
RE034
RE033
RE035
RE037
CE038
RE038
RE039
RE023
RE014
RE013
TE012
TE011
RE015
RE040
RE036
ICE31
JE002
DE010
DE011
RE021
CE032
RE022
RE020
RE019
RE031
RE016
RE043
CE037
RE041
CE041
TE010
RE018
CE012
RE042
CE042
RE044
RE046
TE014
CE011
RE011
CE010
RE010


PCB KDB1 T5 BR (BR-FREE)
20683190.00
RL201
TK200
RL310
RK251
CLF93
FDU01
JK001


WJ001
PK703
PK702
PK701
RK796
AUDIO RIGHT
AUDIO LEFT
VIDEO IN
PCB FCB T5 BR (BR-FREE)
20683190.00

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (THOMSON: VPH 6780 - VPH 6790)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

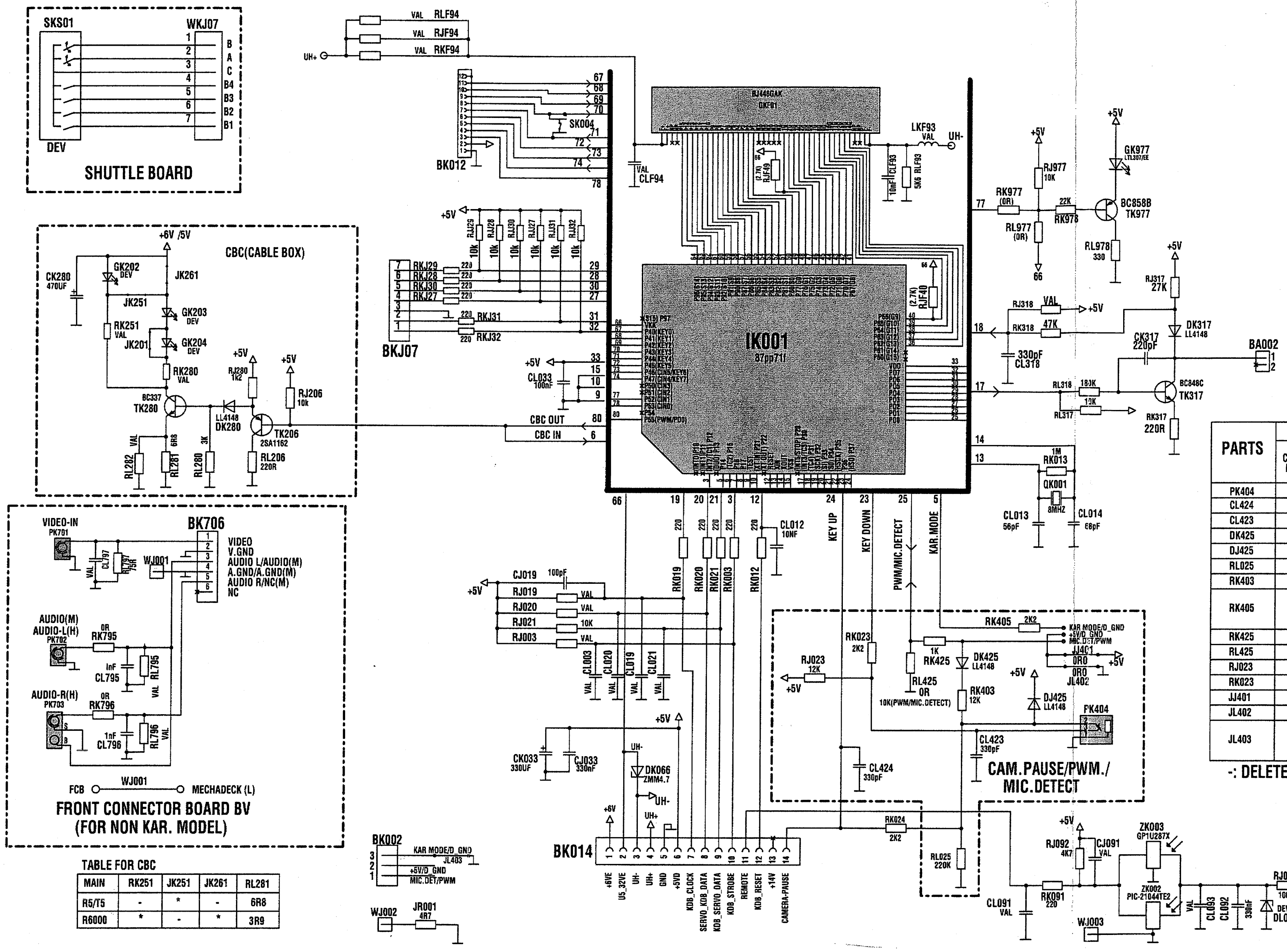

SKS01
WKJ07
DEV
SHUTTLE BOARD
CBC(CABLE BOX)
+6V /5V
CK280 470UF
GK202
JK261
JK251
GK203
RK251
JK201
GK204
RK280
BC337 TK280
DK280
TK206 2SA1162
RL206 220R
RJ206 10k
RL282
RL281
RL280
BKJ07
RKJ29
RKJ28
RKJ30
RKJ27
RKJ31
RKJ32
BK012
SK004
CLF94
VAL RLF94
VAL RJF94
VAL RKF94
UH+
IK001
87pp711
CL033 100nF
CBC OUT
CBC IN
LKF93
RK977
RJ977
GK977
BC858B TK977
RL977
RK978
RL978 330
RJ317 27K
DK317 LL4148
CK317 220pF
BA002
RJ318
RK318 47K
CL318 330pF
RL318
RL317
BC848C TK317
RK317 220R
RK013
QK001 8MHz
CL013 56pF
CL014 68pF
VIDEO-IN PK701
BK706
VIDEO
V.GND
AUDIO L/AUDIO(M)
A.GND/A.GND(M)
AUDIO R/NC(M)
NC
AUDIO(M) AUDIO-L(H) PK702
RK795
CL795
RL795
AUDIO-R(H) PK703
RK796
CL796
RL796
FCB
WJ001
MECHADECK (L)
FRONT CONNECTOR BOARD BV
(FOR NON KAR. MODEL)
CJ019 100pF
RJ019
RJ020
RJ021
RJ003
CL003
CL020
CL019
CL021
CL012 10NF
RK019
RK020
RK021
RK003
RK012
KEY UP
KEY DOWN
PWM/MIC.DETECT
KAR MODE
RK405 2K2
RK023 2K2
RJ023 12K
RK425
DK425 LL4148
RL425 0R
10K(PWM/MIC.DETECT)
RK403 12K
DJ425 LL4148
PK404
JJ401
JL402
CL423 330pF
CL424 330pF
CAM.PAUSE/PWM./MIC.DETECT
CK033 330UF
CJ033 330nF
DK066 ZMM4.7
BK002
KAR MODE/D_GND
+5V/D_GND
MIC.DET/PWM
JL403
BK014
+8VE
US_32VE
UH-
UH+
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
RK024 2K2
RL025 220K
WJ002
JR001 4R7
RJ092 4K7
CJ091
ZK003 GP1U287X
ZK002 PIC-21044TE2
RK091 220
CL091 VAL
CL093
CL092
RJ091 100R
RJ090 120R
DL091
WJ003

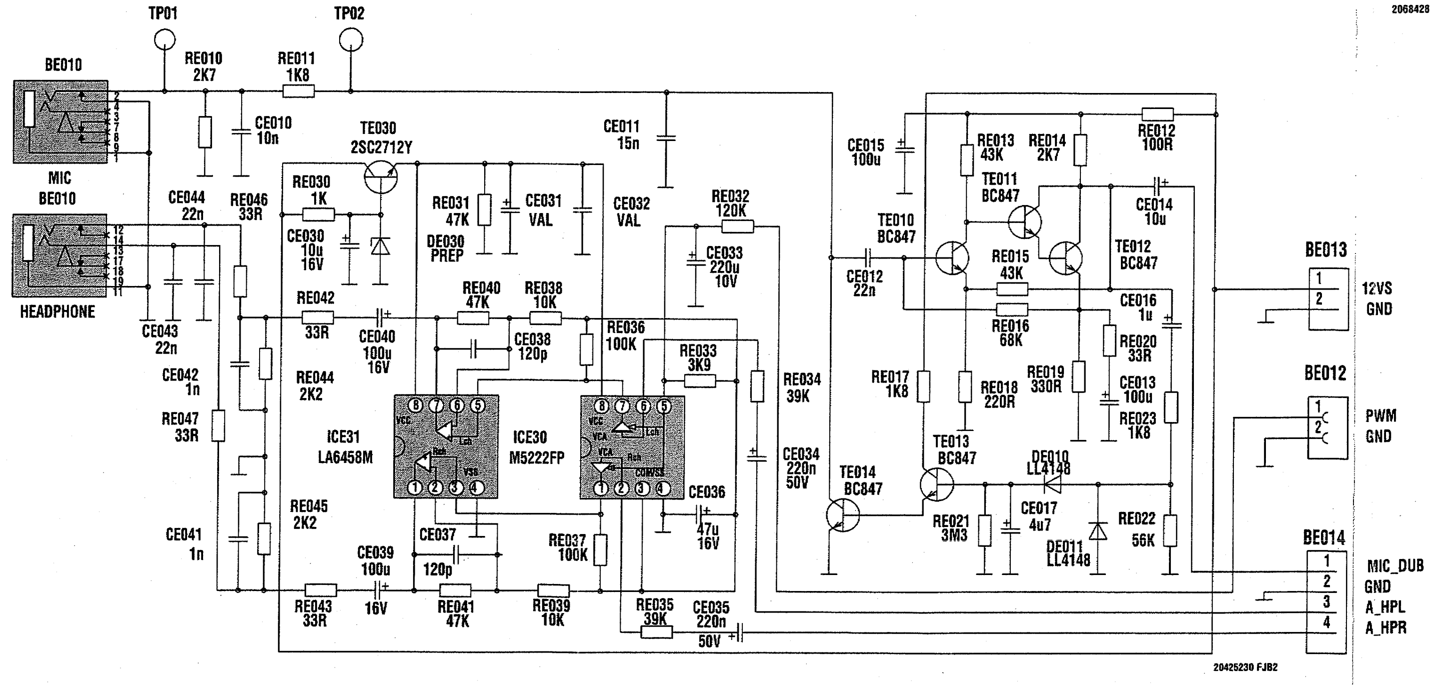
TABLE FOR CBC

MAIN	RK251	JK251	JK261	RL281
R5/T5	-	*	-	6R8
R6000	*	-	*	3R9

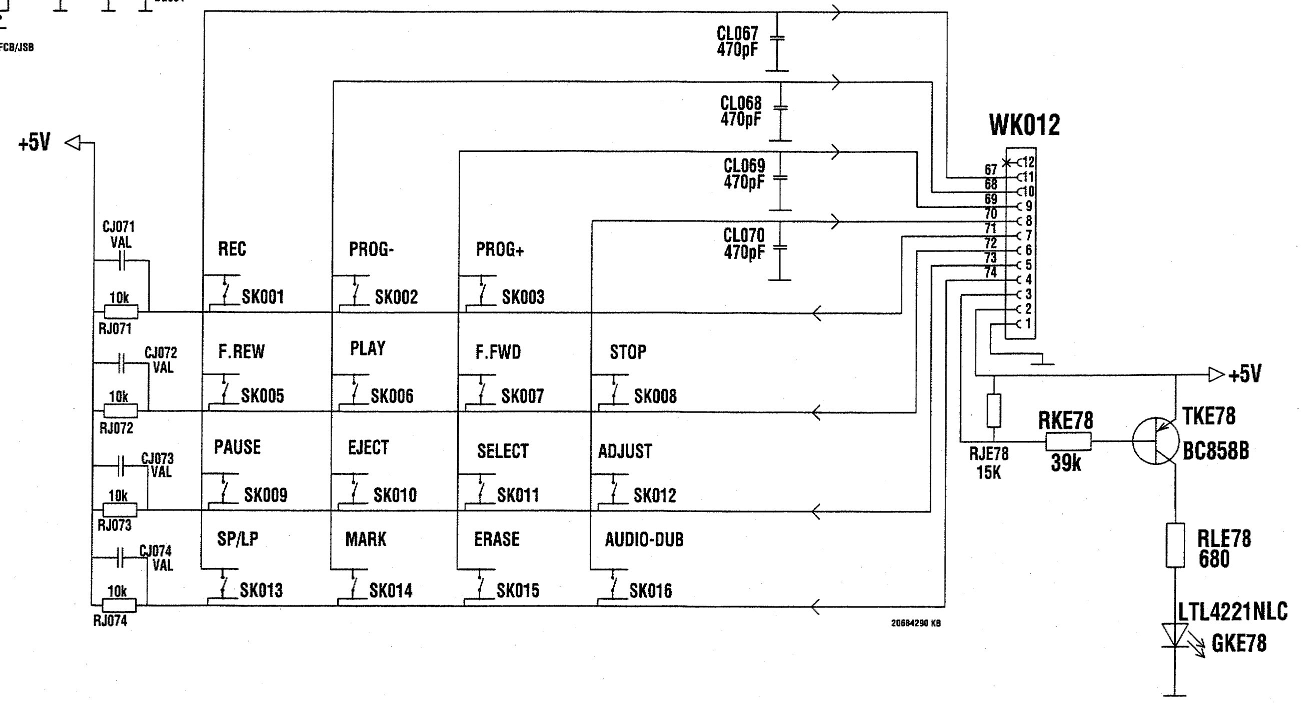
PARTS	OPTION					
	CAMERA PAUSE	W/O CAM PAUSE	PWM	MIC.DETECT	NON KAR. MODELS	
					ASIA	EUROPE
PK404	*	-	-	-	-	-
CL424	*	0R	-	-	-	-
CL423	-	-	-	*	-	-
DK425	-	-	-	*	-	-
DJ425	*	-	-	*	-	-
RL025	*	-	-	*	*	*
RK403	-	-	-	*	-	-
RK405	-	-	-	- (WITHOUT KAR MODE) * (WITH KAR MODE)	-	-
RK425	-	-	*	*	-	-
RL425	-	-	10K	10K	0R	-
RJ023	-	-	-	*	-	-
RK023	-	-	-	*	-	-
JJ401	-	-	-	*	-	-
JL402	-	-	*	-	-	-
JL403	-	-	-	* (WITHOUT KAR MODE) - (WITHKAR MODE)	-	-

-: DELETE *: INSERT

20684280 KDB/FCB/JSB

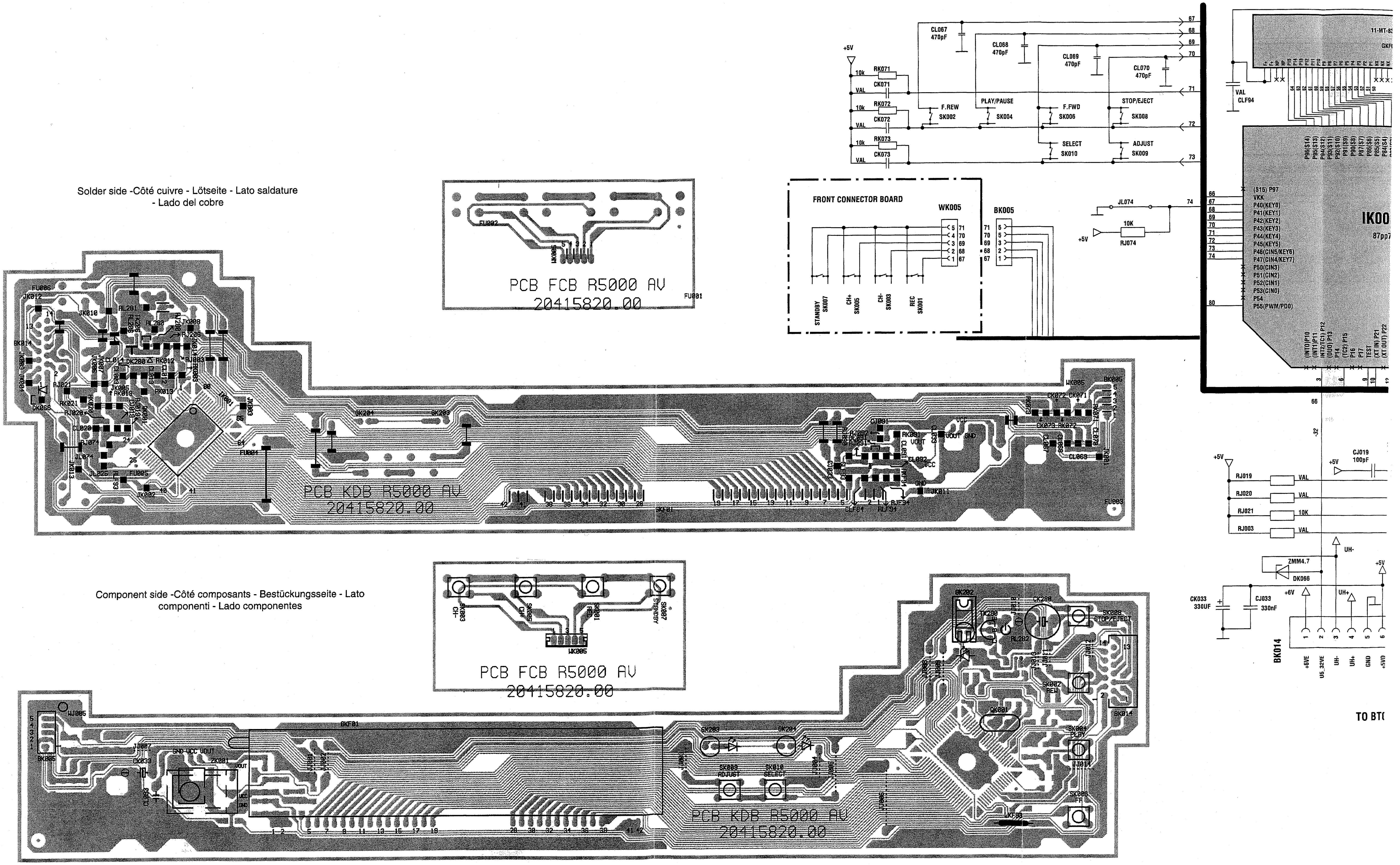

TP01
TP02
BE010
RE010 2K7
RE011 1K8
MIC
HEADPHONE
CE010 10n
TE030 2SC2712Y
CE011 15n
RE030 1K
RE046 33R
CE044 22n
CE030 10u 16V
RE031 47K
CE031 VAL
DE030 PREP
CE032 VAL
RE032 120K
CE033 220u 10V
RE040 47K
RE038 10K
RE042 33R
CE040 100u 16V
CE038 120p
RE036 100K
RE033 3K9
RE044 2K2
ICE31 LA6458M
ICE30 M5222FP
CE043 22n
CE042 1n
RE047 33R
RE045 2K2
CE041 1n
CE039 100u
CE037 120p
RE037 100K
CE036 47u 16V
RE043 33R
16V
RE041 47K
RE039 10K
RE035 39K
CE035 220n 50V
RE034 39K
CE034 220n 50V
CE015 100u
RE013 43K
RE014 2K7
RE012 100R
TE011 BC847
CE014 10u
TE010 BC847
RE015 43K
TE012 BC847
CE012 22n
RE016 68K
CE016 1u
RE020 33R
RE017 1K8
RE018 220R
RE019 330R
CE013 100u
RE023 1K8
TE013 BC847
DE010 LL4148
TE014 BC847
RE021 3M3
CE017 4u7
DE011 LL4148
RE022 56K
BE013
12VS
GND
BE012
PWM
GND
BE014
MIC_DUB
GND
A_HPL
A_HPR

20425230 FJB2


CL067 470pF
CL068 470pF
CL069 470pF
CL070 470pF
WK012
+5V
CJ071 VAL
RJ071 10k
CJ072 VAL
RJ072 10k
CJ073 VAL
RJ073 10k
CJ074 VAL
RJ074 10k
REC
SK001
PROG-
SK002
PROG+
SK003
F.REW
SK005
PLAY
SK006
F.FWD
SK007
STOP
SK008
PAUSE
SK009
EJECT
SK010
SELECT
SK011
ADJUST
SK012
SP/LP
SK013
MARK
SK014
ERASE
SK015
AUDIO-DUB
SK016
RJE78 15K
RKE78 39k
TKE78 BC858B
RLE78 680
LTL4221NLC GKE78
20684290 KB

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZA

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

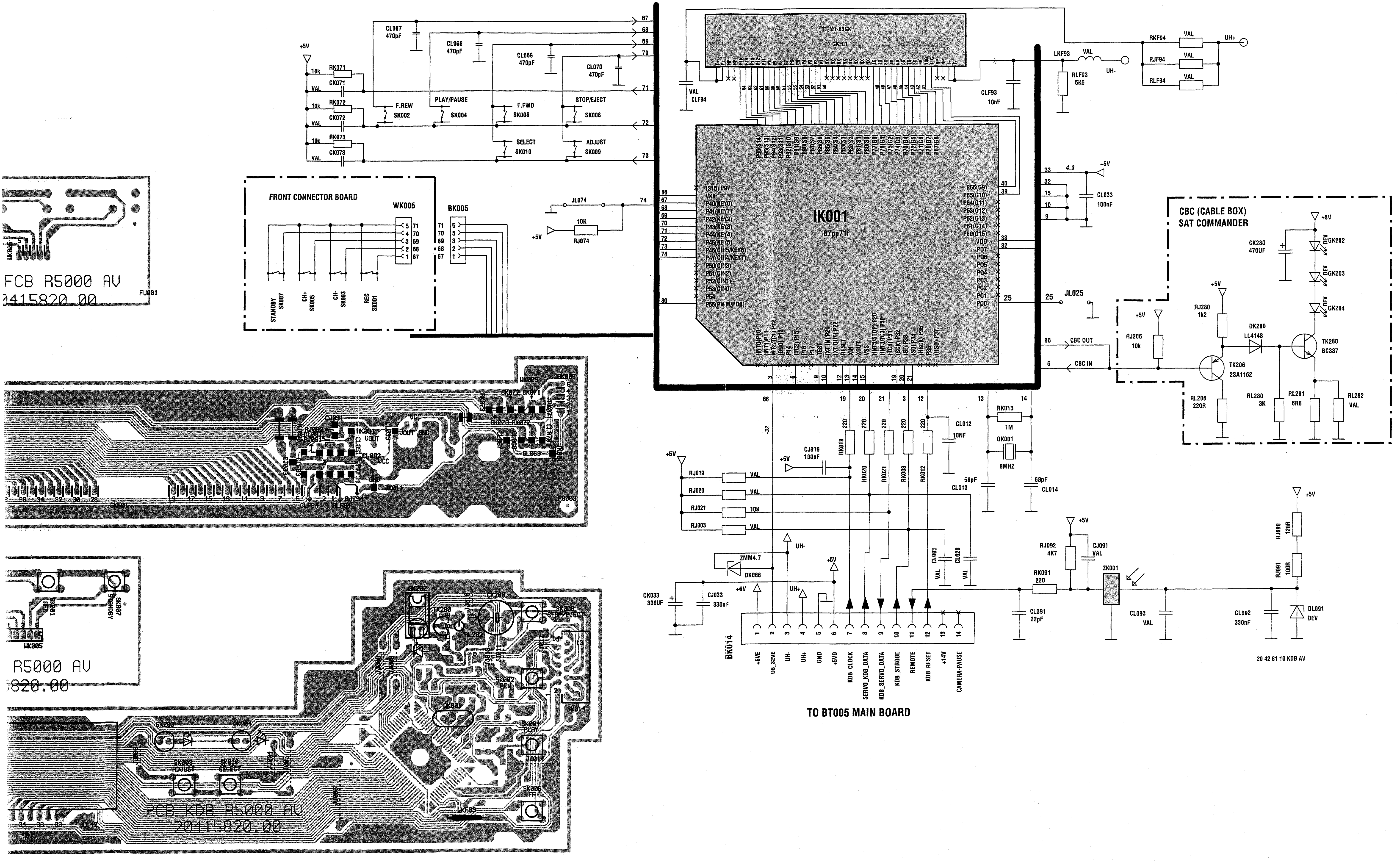

CL067 470pF
CL068 470pF
CL069 470pF
CL070 470pF
+5V
RK071 10k
CK071 VAL
RK072 10k
CK072 VAL
RK073 10k
CK073 VAL
F.REW SK002
PLAY/PAUSE SK004
F.FWD SK006
STOP/EJECT SK008
SELECT SK010
ADJUST SK009
FRONT CONNECTOR BOARD
WK005
BK005
STANDBY SK007
CH+ SK005
CH- SK003
REC SK001
JL074
10K RJ074
VAL CLF94
IK00
87pp
11-MT-8
P40(KEY0)
P41(KEY1)
P42(KEY2)
P43(KEY3)
P44(KEY4)
P45(KEY5)
P46(CIN5/KEY6)
P47(CIN4/KEY7)
P50(CIN3)
P51(CIN2)
P52(CIN1)
P53(CIN0)
P54
P55(PWM/PD0)
RJ019 VAL
RJ020 VAL
RJ021 10K
RJ003 VAL
CJ019 100pF
ZMM4.7 DK066
CK033 330UF
CJ033 330nF
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
TO BT
PCB FCB R5000 AV 20415820.00
PCB KDB R5000 AV 20415820.00
SK203
SK204
SK002 REW
SK004 PLAY
SK006 FF
SK008 STOP/EJECT
SK009 ADJUST
SK010 SELECT
SK001 REC
SK003 CH-
SK005 CH+
SK007 STANDBY
WK005
BK005
BK014
KF01

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

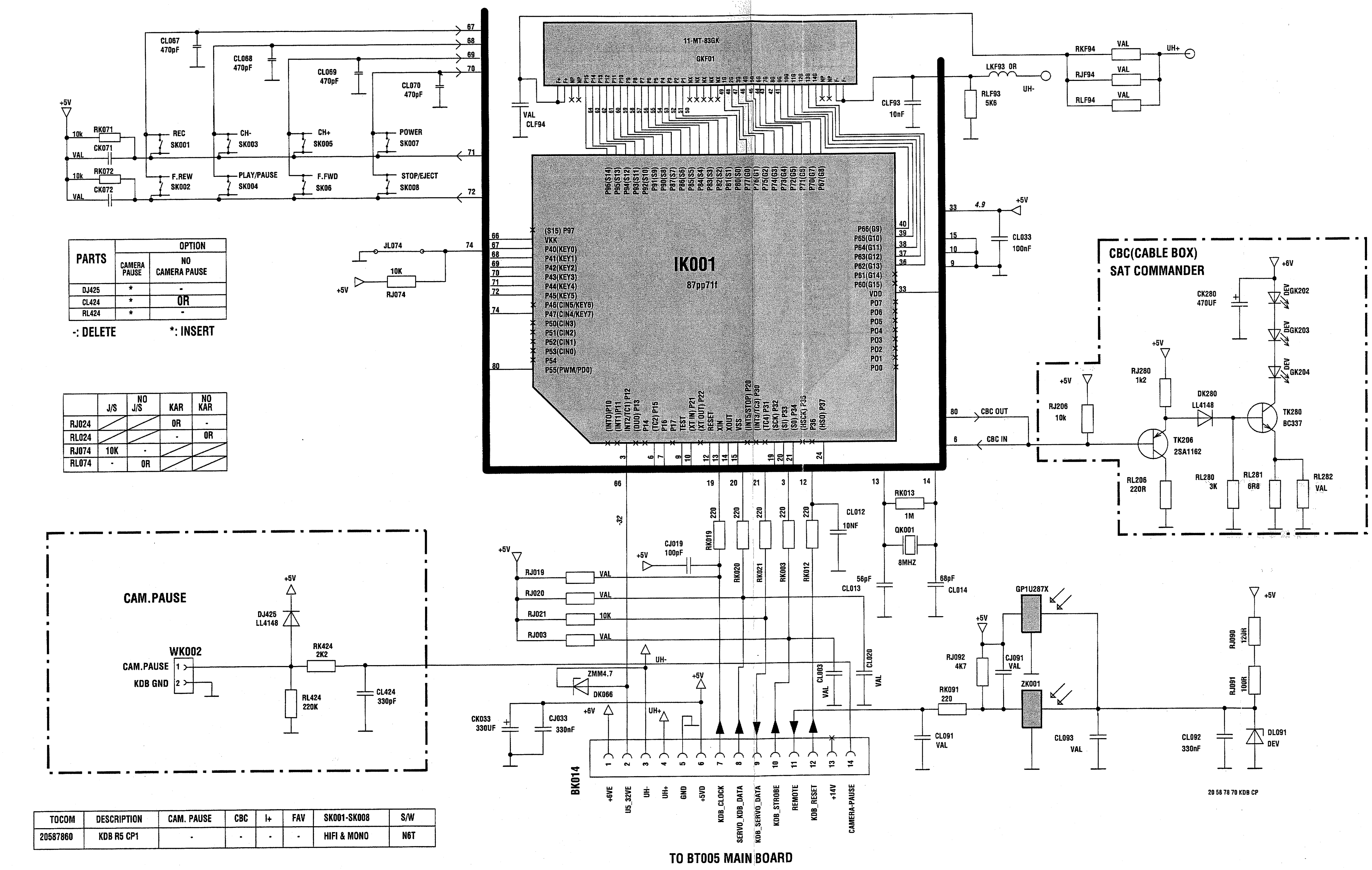
FFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (THOMSON: VPH 6601)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


IK001
87pp71f
11-MT-83GK
GKF01
FRONT CONNECTOR BOARD
WK005
BK005
STANDBY SK007
CH+ SK005
CH- SK003
REC SK001
F.REW SK002
PLAY/PAUSE SK004
F.FWD SK006
STOP/EJECT SK008
SELECT SK010
ADJUST SK009
CL067 470pF
CL068 470pF
CL069 470pF
CL070 470pF
RK071 10k
RK072 10k
RK073 10k
CK071 VAL
CK072 VAL
CK073 VAL
+5V
JL074
RJ074 10K
LKF93 VAL
RLF93 5K6
CLF93 10nF
CLF94 VAL
RKF94 VAL
RJF94 VAL
RLF94 VAL
UH+
UH-
CL033 100nF
JL025
CBC OUT
CBC IN
CBC (CABLE BOX)
SAT COMMANDER
CK280 470UF
GK202
GK203
GK204
RJ280 1k2
DK280 LL4148
TK280 BC337
RJ206 10k
TK206 2SA1162
RL206 220R
RL280 3K
RL281 6R8
RL282 VAL
RK013 1M
QK001 8MHZ
CL012 10NF
CL013 56pF
CL014 68pF
CJ019 100pF
RJ019 VAL
RJ020 VAL
RJ021 10K
RJ003 VAL
RK019 220
RK020 220
RK021 220
RK003 220
RK012 220
CL003 VAL
CL020 VAL
ZMM4.7
DK066
CK033 330UF
CJ033 330nF
+6V
RJ092 4K7
CJ091 VAL
RK091 220
ZK001
CL091 22pF
CL093 VAL
CL092 330nF
RJ090 120R
RJ091 100R
DL091 DEV
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
TO BT005 MAIN BOARD
20 42 81 10 KDB AV
FCB R5000 AV
20415820.00
PCB KDB R5000 AV
20415820.00
FU001
FU003
SKF01
SK002 REW
SK004 PLAY
SK006 FF
SK008 STOP/EJECT
SK009 ADJUST
SK010 SELECT
SK007 STANDBY
LKF93

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (SABA: VR 7081)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


11-MT-83GK
GKF01
IK001
87pp71f
CL067 470pF
CL068 470pF
CL069 470pF
CL070 470pF
RK071
CK071
RK072
CK072
REC SK001
CH- SK003
CH+ SK005
POWER SK007
F.REW SK002
PLAY/PAUSE SK004
F.FWD SK06
STOP/EJECT SK008
JL074
RJ074 10K
+5V
VAL CLF94
LKF93 0R
RLF93 5K6
CLF93 10nF
RKF94 VAL
RJF94 VAL
RLF94 VAL
UH+
UH-
CL033 100nF
CBC(CABLE BOX)
SAT COMMANDER
CK280 470UF
GK202
GK203
GK204
DEV
RJ280 1k2
DK280 LL4148
TK280 BC337
TK206 2SA1162
RJ206 10k
RL206 220R
RL280 3K
RL281 6R8
RL282 VAL
CBC OUT
CBC IN
RK019 220
RK020 220
RK021 220
RK003 220
RK012 220
CL012 10NF
RK013 1M
QK001 8MHZ
CL013 56pF
CL014 68pF
CJ019 100pF
RJ019 VAL
RJ020 VAL
RJ021 10K
RJ003 VAL
CL003 VAL
CL020 VAL
ZMM4.7
DK066
CK033 330UF
CJ033 330nF
GP1U287X
ZK001
RJ092 4K7
CJ091 VAL
RK091 220
CL091 VAL
CL093 VAL
CL092 330nF
RJ090 120R
RJ091 100R
DL091 DEV
CAM.PAUSE
WK002
CAM.PAUSE
KDB GND
DJ425 LL4148
RK424 2K2
RL424 220K
CL424 330pF
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
TO BT005 MAIN BOARD
20 58 78 70 KDB CP

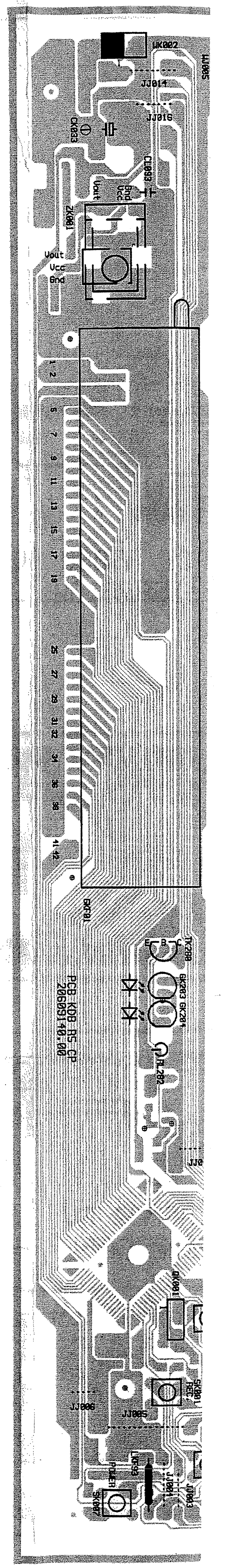
PARTS	OPTION	
	CAMERA PAUSE	NO CAMERA PAUSE
DJ425	*	-
CL424	*	0R
RL424	*	-

-: DELETE *: INSERT

	J/S	NO J/S	KAR	NO KAR
RJ024			0R	-
RL024			-	0R
RJ074	10K	-		
RL074	-	0R		

TOCOM	DESCRIPTION	CAM. PAUSE	CBC	I+	FAV	SK001-SK008	S/W
20587860	KDB R5 CP1	-	-	-	-	HIFI & MONO	N6T

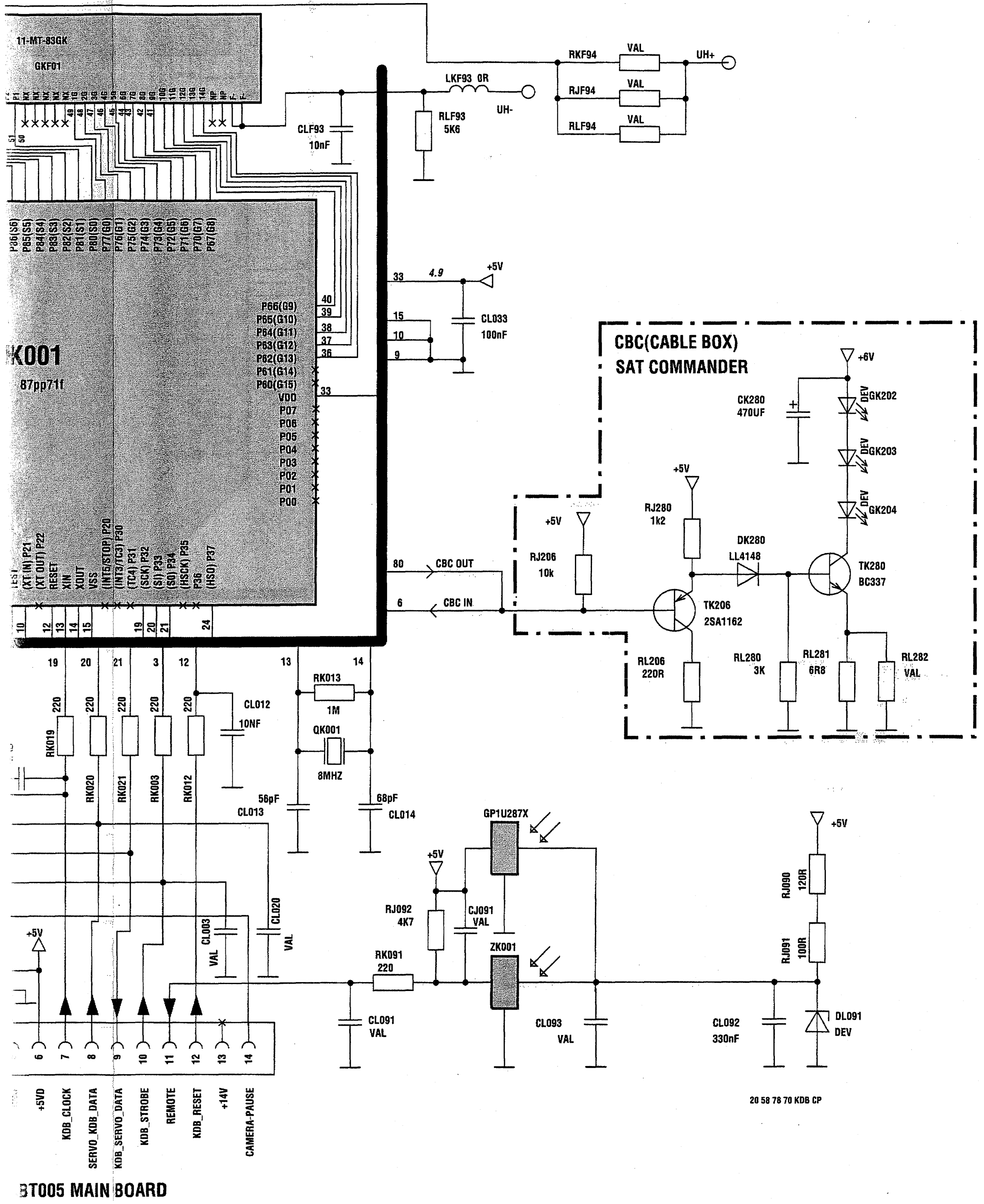
Component side -Côté composar
componenti - Lado


UK002
JJ014
JJ016
JJ006
JJ005
PCB KDB R5 CP
20585140.00

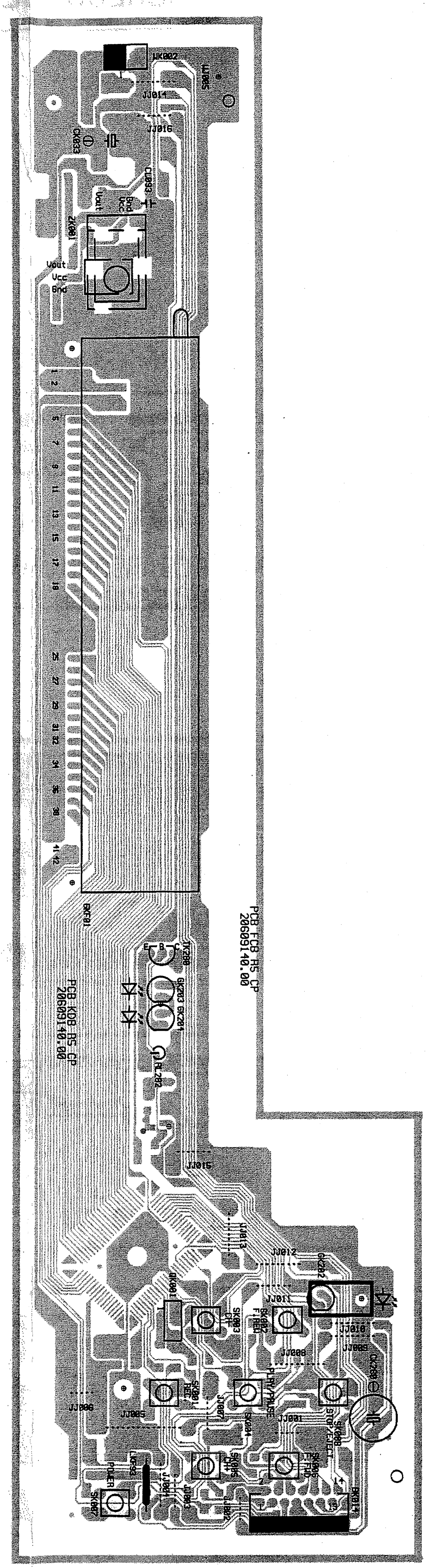
Updated

ICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY -

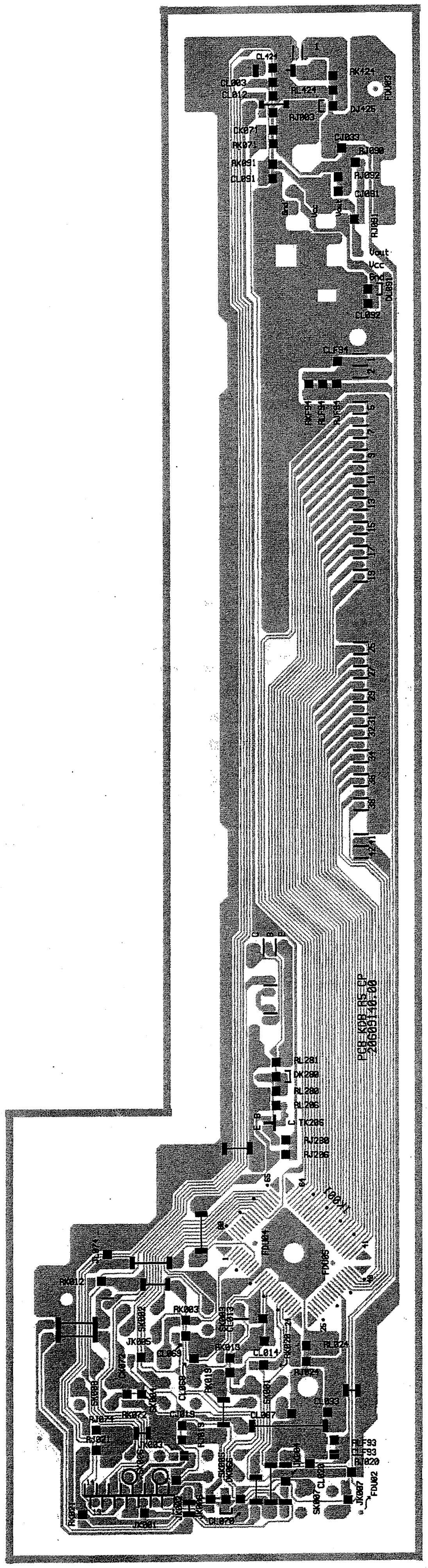
UEMA


11-MT-83GK
GKF01
K001
87pp71
LKF93 0R
UH-
UH+
RKF94 VAL
RJF94 VAL
RLF94 VAL
RLF93 5K6
CLF93 10nF
+5V
CL033 100nF
CBC(CABLE BOX) SAT COMMANDER
+6V
CK280 470UF
GK202
GK203
GK204
RJ206 10k
RJ280 1k2
DK280 LL4148
TK280 BC337
TK206 2SA1162
RL206 220R
RL280 3K
RL281 6R8
RL282 VAL
CBC OUT
CBC IN
RK013 1M
QK001 8MHZ
CL012 10NF
56pF CL013
68pF CL014
RK019
RK020
RK021
RK003
RK012
GP1U287X
RJ092 4K7
CJ091 VAL
ZK001
RK091 220
CL091 VAL
CL093 VAL
CL003 VAL
CL020 VAL
RJ000 120R
RJ091 100R
CL092 330nF
DL091 DEV
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
BT005 MAIN BOARD
20 58 78 70 KDB CP

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

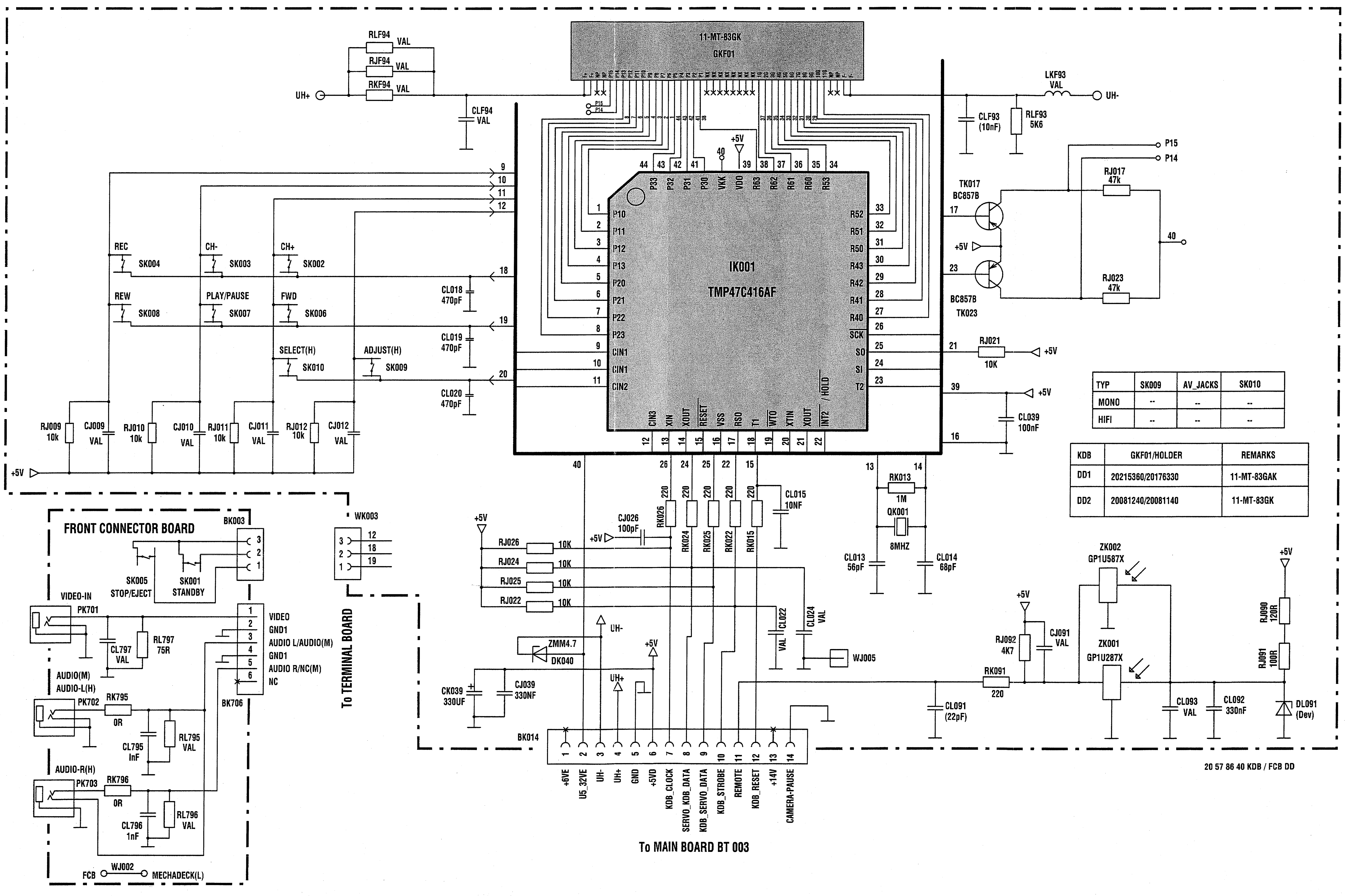

PCB FCD R5 CP
20609140.00
PCB KDB R5 CP
20609140.00

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre



KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (TELEFUNKEN: T 8006 HIFI)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

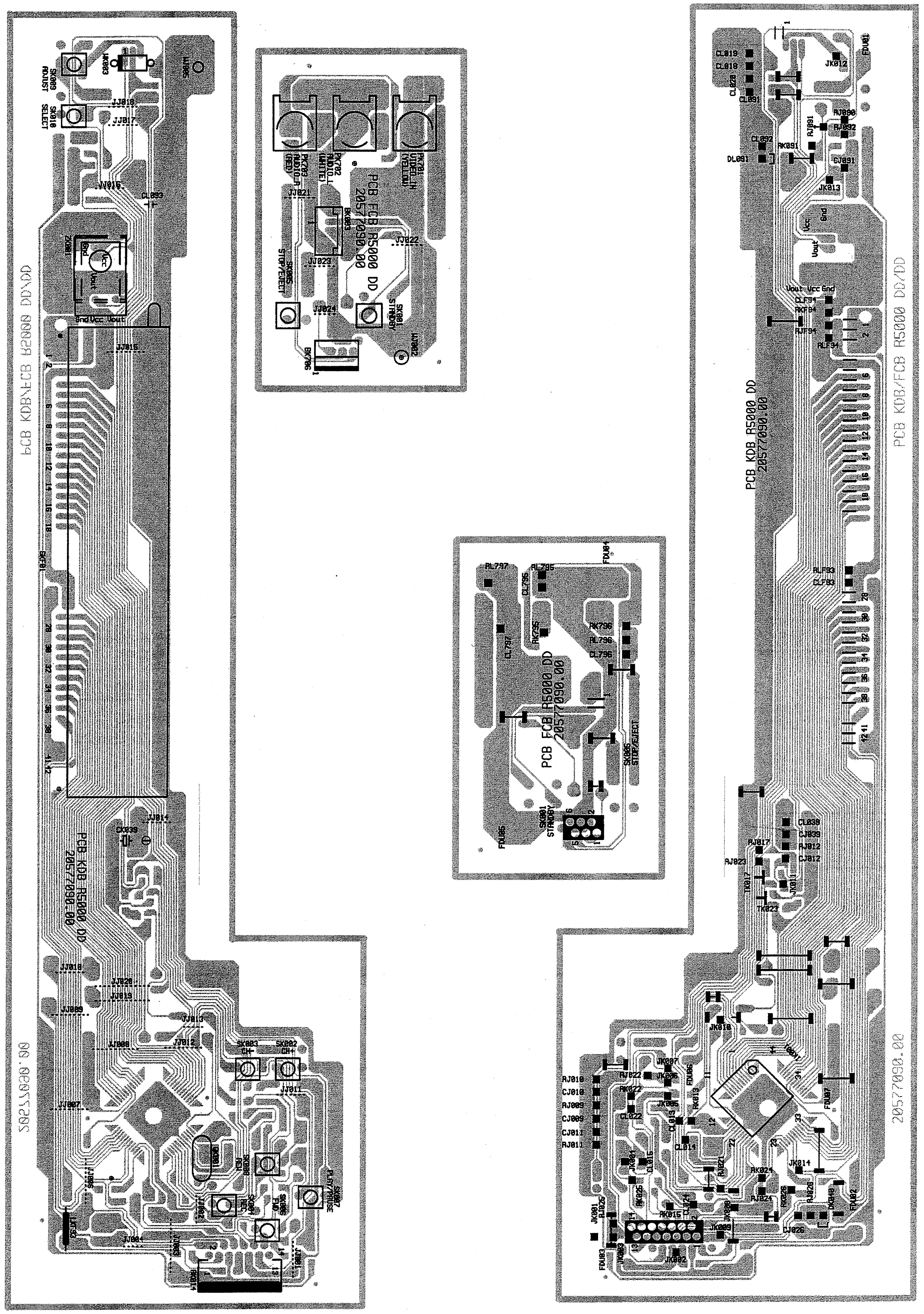

11-MT-83GK
GKF01
RLF94 VAL
RJF94 VAL
RKF94 VAL
UH+
CLF94 VAL
LKF93 VAL
UH-
CLF93 (10nF)
RLF93 5K6
P15
P14
RJ017 47k
RJ023 47k
TK017 BC857B
TK023 BC857B
+5V
40
IK001
TMP47C416AF
P10
P11
P12
P13
P20
P21
P22
P23
CIN1
CIN1
CIN2
P33
P32
P31
P30
VKK
VDD
R63
R62
R61
R60
R53
R52
R51
R50
R43
R42
R41
R40
SCK
SO
SI
T2
CIN3
XIN
XOUT
RESET
VSS
RSO
T1
WTO
XTIN
XOUT
INT2
/HOLD
RJ021 10K
CL039 100nF
REC SK004
CH- SK003
CH+ SK002
REW SK008
PLAY/PAUSE SK007
FWD SK006
SELECT(H) SK010
ADJUST(H) SK009
CL018 470pF
CL019 470pF
CL020 470pF
RJ009 10k
CJ009 VAL
RJ010 10k
CJ010 VAL
RJ011 10k
CJ011 VAL
RJ012 10k
CJ012 VAL
+5V
RK026 220
RK024 220
RK025 220
RK022 220
RK015 220
CL015 10NF
CJ026 100pF
RJ026 10K
RJ024 10K
RJ025 10K
RJ022 10K
CL022 VAL
CL024 VAL
WJ005
ZMM4.7 DK040
CK039 330UF
CJ039 330NF
UH-
UH+
+5V
RK013 1M
QK001 8MHZ
CL013 56pF
CL014 68pF
ZK002 GP1U587X
ZK001 GP1U287X
RJ092 4K7
CJ091 VAL
RK091 220
CL091 (22pF)
CL093 VAL
CL092 330nF
RJ090 120R
RJ091 100R
DL091 (Dev)
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
To MAIN BOARD BT 003
WK003
To TERMINAL BOARD
FRONT CONNECTOR BOARD
BK003
SK005 STOP/EJECT
SK001 STANDBY
VIDEO-IN
PK701
CL797 VAL
RL797 75R
AUDIO(M)
AUDIO-L(H)
PK702
RK795 0R
CL795 InF
RL795 VAL
AUDIO-R(H)
PK703
RK796 0R
CL796 1nF
RL796 VAL
BK706
VIDEO
GND1
AUDIO L/AUDIO(M)
GND1
AUDIO R/NC(M)
NC
FCB
WJ002
MECHADECK(L)
20 57 86 40 KDB / FCB DD

TYP	SK009	AV_JACKS	SK010
MONO	--	--	--
HIFI	--	--	--

KDB	GKF01/HOLDER	REMARKS
DD1	20215360/20176330	11-MT-83GAK
DD2	20081240/20081140	11-MT-83GK

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(TELEFUNKEN : T 8006 HIFI)**

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes


PCB KDB R5000 DD
20577090.00
PCB KDB/FCB R5000 DD/DD

PCB FCB R5000 DD
20577090.00
SK001 STANDBY
SK002 STOP/EJECT

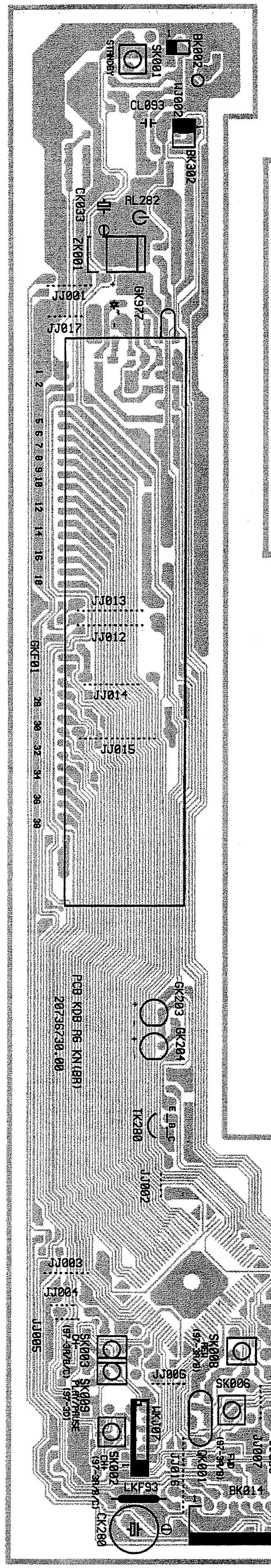
Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre

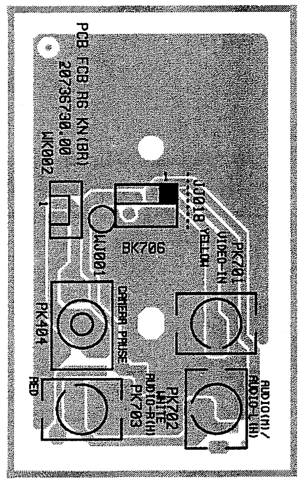
PCB FCB R5000 DD
20577090.00
SK001 STANDBY
SK002 STOP/EJECT

PCB KDB R5000 DD
20577090.00
PCB KDB/FCB R5000 DD/DD
20577090.00

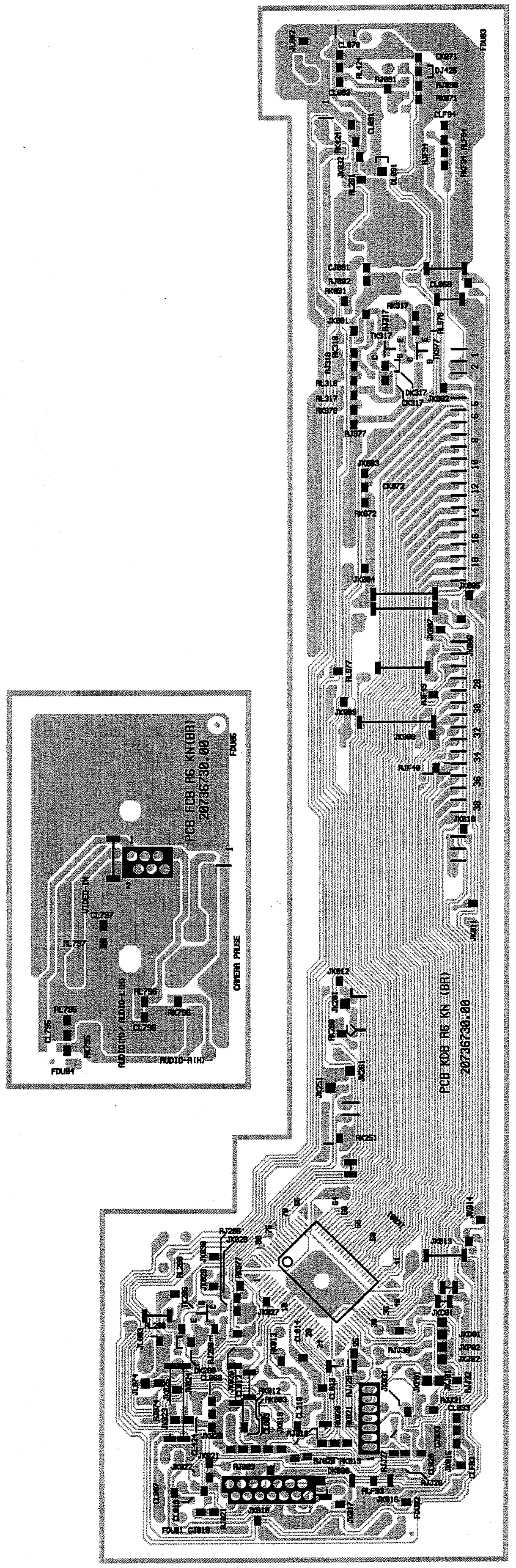
KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(SABA : VR 8083 H)**

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes


PCB KDB A6 KN(BR)
20736730.00


PCB FCB A6 KN(BR)
20736730.00
BK706
PK404
CAMERA PAUSE

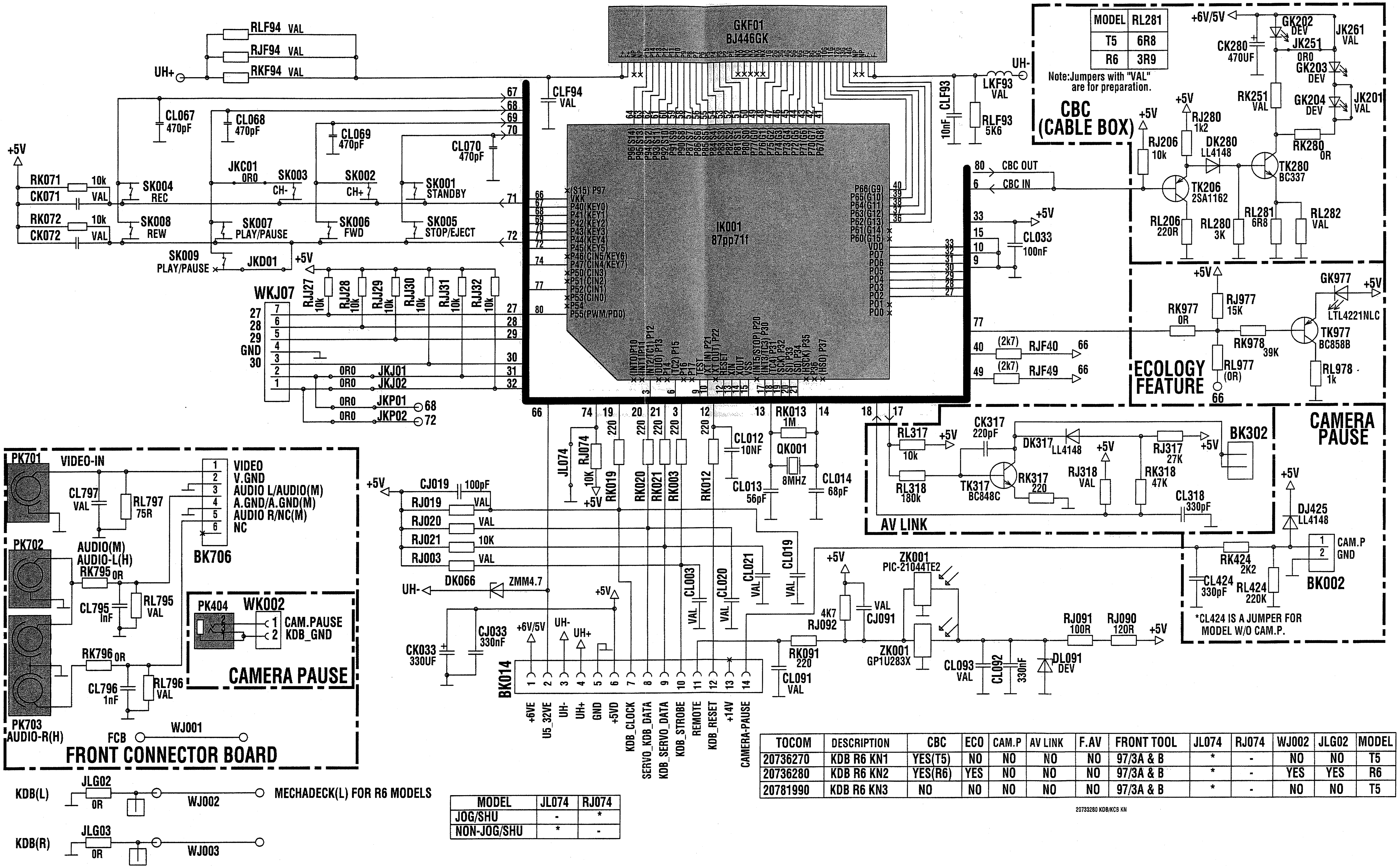
Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre


PCB FCB A6 KN(BR)
20736730.00
CAMERA PAUSE

PCB KDB A6 KN(BR)
20736730.00

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (SABA: VR 8083 H)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


GKF01
BJ446GK
IK001
87pp71f
RLF94 VAL
RJF94 VAL
RKF94 VAL
UH+
UH-
CLF94 VAL
LKF93 VAL
CLF93 10nF
RLF93 5K6
CL067 470pF
CL068 470pF
CL069 470pF
CL070 470pF
JKC01 0R0
SK004 REC
SK003 CH-
SK002 CH+
SK001 STANDBY
SK008 REW
SK007 PLAY/PAUSE
SK006 FWD
SK005 STOP/EJECT
SK009 PLAY/PAUSE
JKD01
RK071 10k
CK071 VAL
RK072 10k
CK072 VAL
+5V
WKJ07
RJJ27 10k
RJJ28 10k
RJJ29 10k
RJJ30 10k
RJJ31 10k
RJJ32 10k
GND
JKJ01 0R0
JKJ02 0R0
JKP01 0R0
JKP02 0R0
80 CBC OUT
6 CBC IN
CL033 100nF
RJF40 (2k7)
RJF49 (2k7)
CBC
(CABLE BOX)
+6V/5V
CK280 470UF
GK202 DEV
JK251 0R0
GK203 DEV
GK204 DEV
JK261 VAL
JK201 VAL
RK251 VAL
RJ280 1k2
RJ206 10k
DK280 LL4148
TK280 BC337
RK280 0R
TK206 2SA1162
RL206 220R
RL280 3K
RL281 6R8
RL282 VAL
ECOLOGY FEATURE
GK977
LTL4221NLC
RK977 0R
RJ977 15K
RK978 39K
TK977 BC858B
RL977 (0R)
RL978 1k
CAMERA PAUSE
BK302
AV LINK
RL317 10k
CK317 220pF
DK317 LL4148
RJ317 27K
TK317 BC848C
RK317 220
RL318 180k
RJ318 VAL
RK318 47K
CL318 330pF
DJ425 LL4148
BK002
CAM.P
GND
RK424 2K2
CL424 330pF
RL424 220K
*CL424 IS A JUMPER FOR MODEL W/O CAM.P.
RK013 1M
QK001 8MHZ
CL012 10NF
CL013 56pF
CL014 68pF
JL074
RJ074 10K
RK019 220
RK020 220
RK021 220
RK003 220
RK012 220
CL003 VAL
CL020 VAL
CL021 VAL
CL019 VAL
CJ019 100pF
RJ019 VAL
RJ020 VAL
RJ021 10K
RJ003 VAL
DK066 ZMM4.7
CK033 330UF
CJ033 330nF
ZK001 PIC-21044TE2
ZK001 GP1U283X
RJ092 4K7
CJ091 VAL
RK091 220
CL091 VAL
CL093 VAL
CL092 330nF
DL091 DEV
RJ091 100R
RJ090 120R
BK014
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
PK701 VIDEO-IN
CL797 VAL
RL797 75R
PK702
AUDIO(M)
AUDIO-L(H)
RK795 0R
CL795 1nF
RL795 VAL
RK796 0R
CL796 1nF
RL796 VAL
PK703 AUDIO-R(H)
BK706
VIDEO
V.GND
AUDIO L/AUDIO(M)
A.GND/A.GND(M)
AUDIO R/NC(M)
NC
PK404
WK002
CAM.PAUSE
KDB_GND
CAMERA PAUSE
FCB
WJ001
FRONT CONNECTOR BOARD
KDB(L)
JLG02 0R
WJ002
MECHADECK(L) FOR R6 MODELS
KDB(R)
JLG03 0R
WJ003
20733280 KDB/KCB KN

MODEL	RL281
T5	6R8
R6	3R9

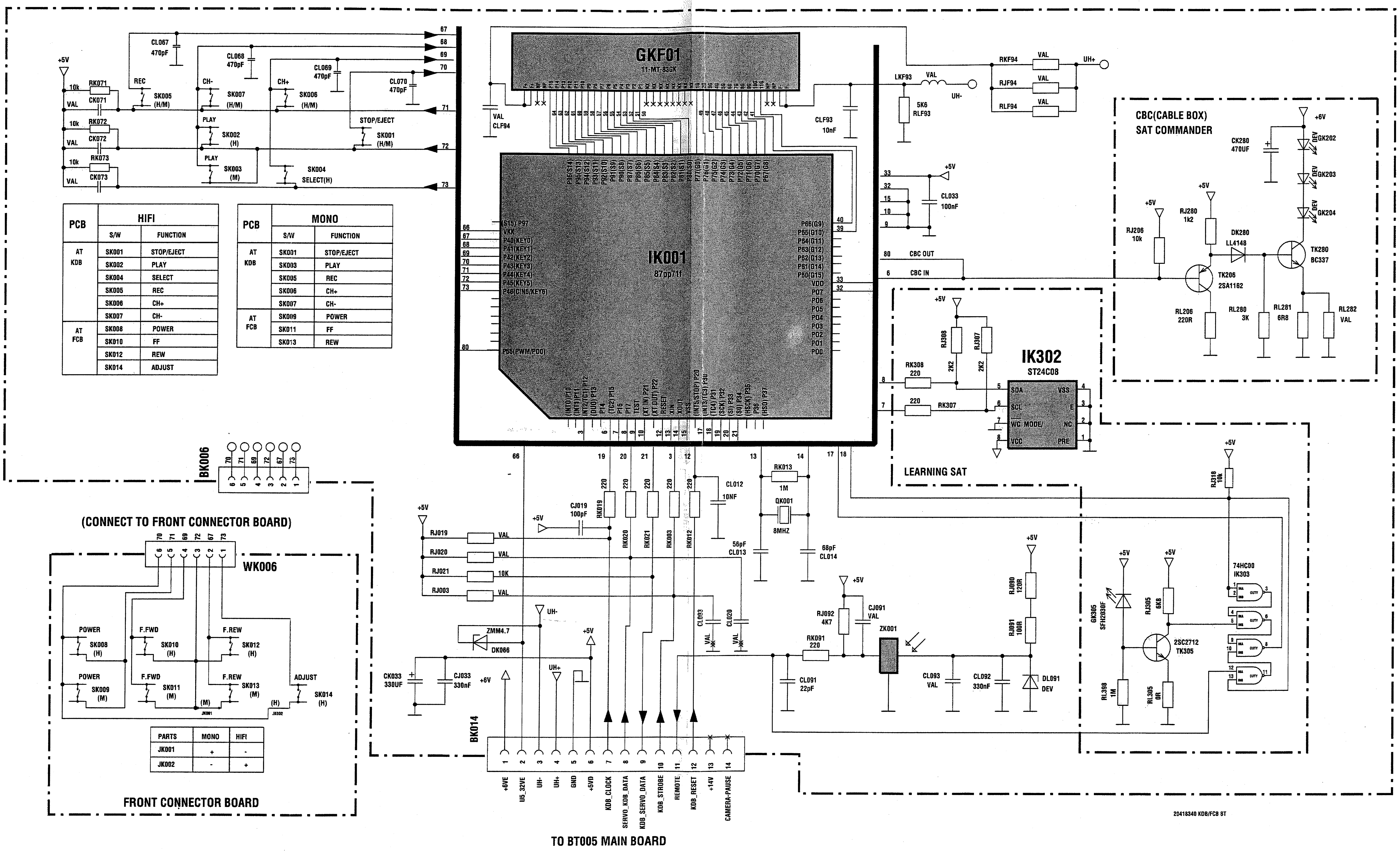
Note:Jumpers with "VAL" are for preparation.

MODEL	JL074	RJ074
JOG/SHU	-	*
NON-JOG/SHU	*	-

TOCOM	DESCRIPTION	CBC	ECO	CAM.P	AV LINK	F.AV	FRONT TOOL	JL074	RJ074	WJ002	JLG02	MODEL
20736270	KDB R6 KN1	YES(T5)	NO	NO	NO	NO	97/3A & B	*	-	NO	NO	T5
20736280	KDB R6 KN2	YES(R6)	YES	NO	NO	NO	97/3A & B	*	-	YES	YES	R6
20781990	KDB R6 KN3	NO	NO	NO	NO	NO	97/3A & B	*	-	NO	NO	T5

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (SABA: VR 6081)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA



GKF01
11-MT-83GK
IK001
87pp71f
IK302
ST24C08
LEARNING SAT
CBC(CABLE BOX) SAT COMMANDER
74HC00 IK303
BK006
WK006
(CONNECT TO FRONT CONNECTOR BOARD)
FRONT CONNECTOR BOARD
BK014
TO BT005 MAIN BOARD
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
CL067 470pF
CL068 470pF
CL069 470pF
CL070 470pF
RK071
RK072
RK073
CK071
CK072
CK073
SK001 (H/M) STOP/EJECT
SK002 (H) PLAY
SK003 (M) PLAY
SK004 SELECT(H)
SK005 (H/M) REC
SK006 (H/M) CH+
SK007 (H/M) CH-
SK008 (H) POWER
SK009 (M) POWER
SK010 (H) F.FWD
SK011 (M) F.FWD
SK012 (H) F.REW
SK013 (M) F.REW
SK014 (H) ADJUST
JK001
JK002
CLF94 VAL
LKF93 VAL
RLF93 5K6
CLF93 10nF
RKF94 VAL
RJF94 VAL
RLF94 VAL
UH+
CL033 100nF
CBC OUT
CBC IN
RJ308 2K2
RJ307 2K2
RK308 220
RK307 220
SDA
SCL
WC MODE/
VCC
VSS
E
NC
PRE
CK280 470UF
GK202 DEV
GK203 DEV
GK204 DEV
RJ280 1k2
RJ206 10k
DK280 LL4148
TK280 BC337
TK206 2SA1162
RL206 220R
RL280 3K
RL281 6R8
RL282 VAL
RJ318 10k
GK305 SFH2030F
RJ305 6K8
2SC2712 TK305
RL398 1M
RL305 0R
RK013 1M
QK001 8MHZ
CL012 10NF
CL013 56pF
CL014 68pF
CJ019 100pF
RJ019 VAL
RJ020 VAL
RJ021 10K
RJ003 VAL
RK019 220
RK020 220
RK021 220
RK003 220
RK012 220
CL093 VAL
CL020 VAL
ZMM4.7 DK066
CK033 330UF
CJ033 330nF
RJ092 4K7
CJ091 VAL
RK091 220
ZK001
CL091 22pF
CL093 VAL
CL092 330nF
RJ090 120R
RJ091 100R
DL091 DEV
+5V
+6V
UH-
20418340 KDB/FCB BT

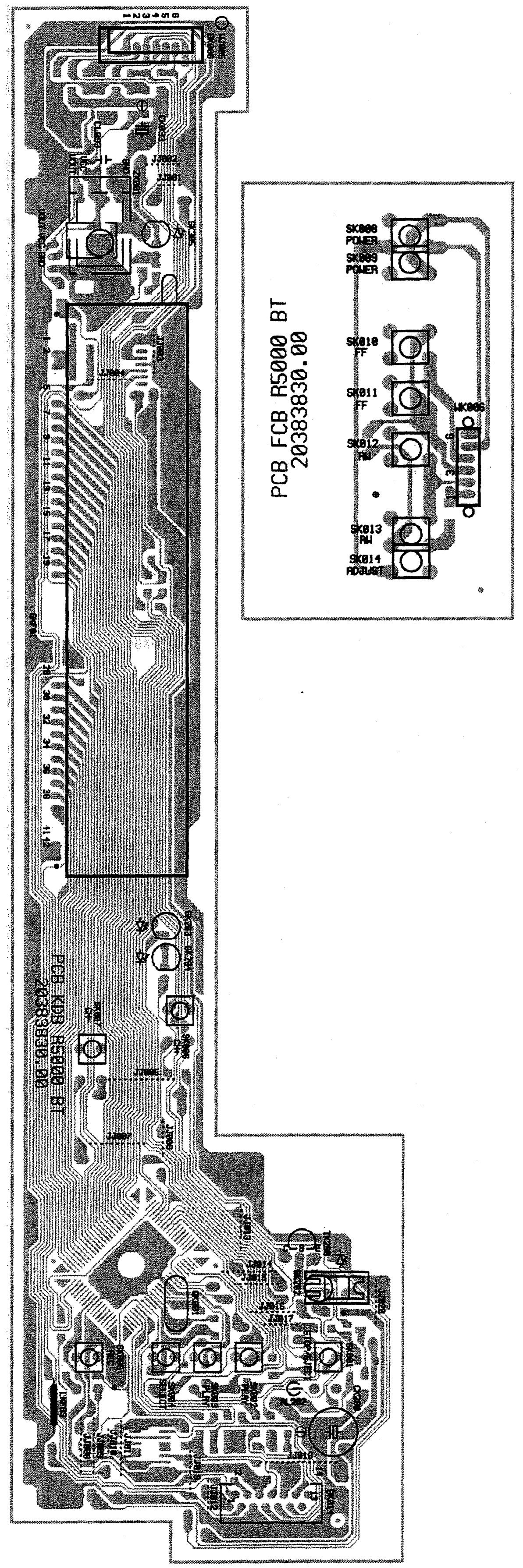
PCB	HIFI	
	S/W	FUNCTION
AT KDB	SK001	STOP/EJECT
	SK002	PLAY
	SK004	SELECT
	SK005	REC
	SK006	CH+
	SK007	CH-
AT FCB	SK008	POWER
	SK010	FF
	SK012	REW
	SK014	ADJUST

PCB	MONO	
	S/W	FUNCTION
AT KDB	SK001	STOP/EJECT
	SK003	PLAY
	SK005	REC
	SK006	CH+
	SK007	CH-
AT FCB	SK009	POWER
	SK011	FF
	SK013	REW

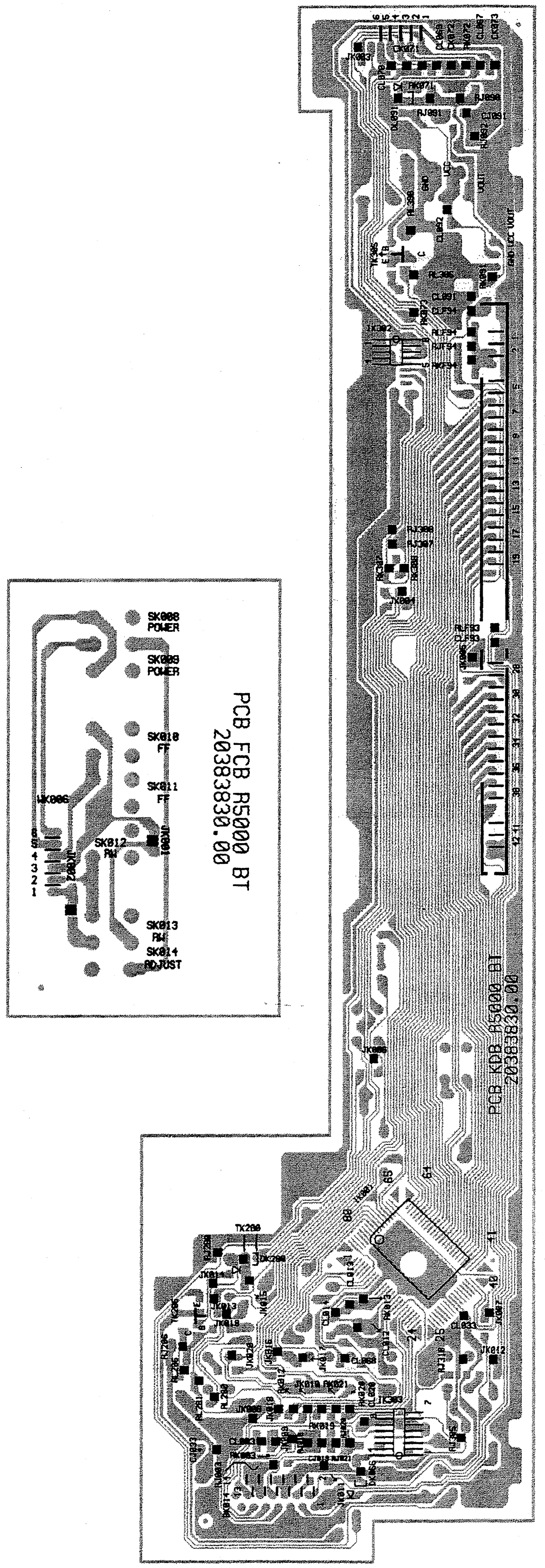
PARTS	MONO	HIFI
JK001	+	-
JK002	-	+

TOCOM NO.	DESCRIPTION	CBC	L.SAT
20383890	KDB/FCB R5 BT1/BT1	+	-
20399450	KDB/FCB R5 BT6/BT2	-	-
20443060	KDB/FCB R5 BT8/BT1	-	-

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(SABA : VR 6081)**

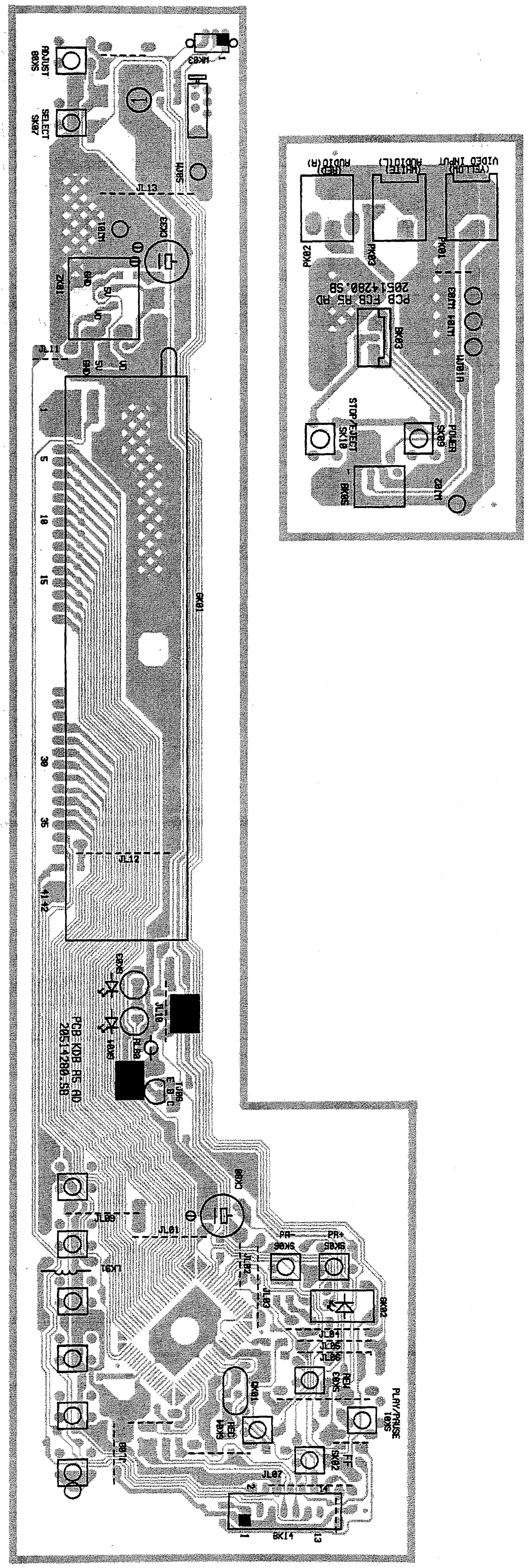

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

PCB FCB R5000 BT
20383830.00
SK008 POWER
SK009 POWER
SK010 FF
SK011 FF
SK012 RW
SK013 RW
SK014 ADJUST
WK006
PCB KDB R5000 BT
20383830.00

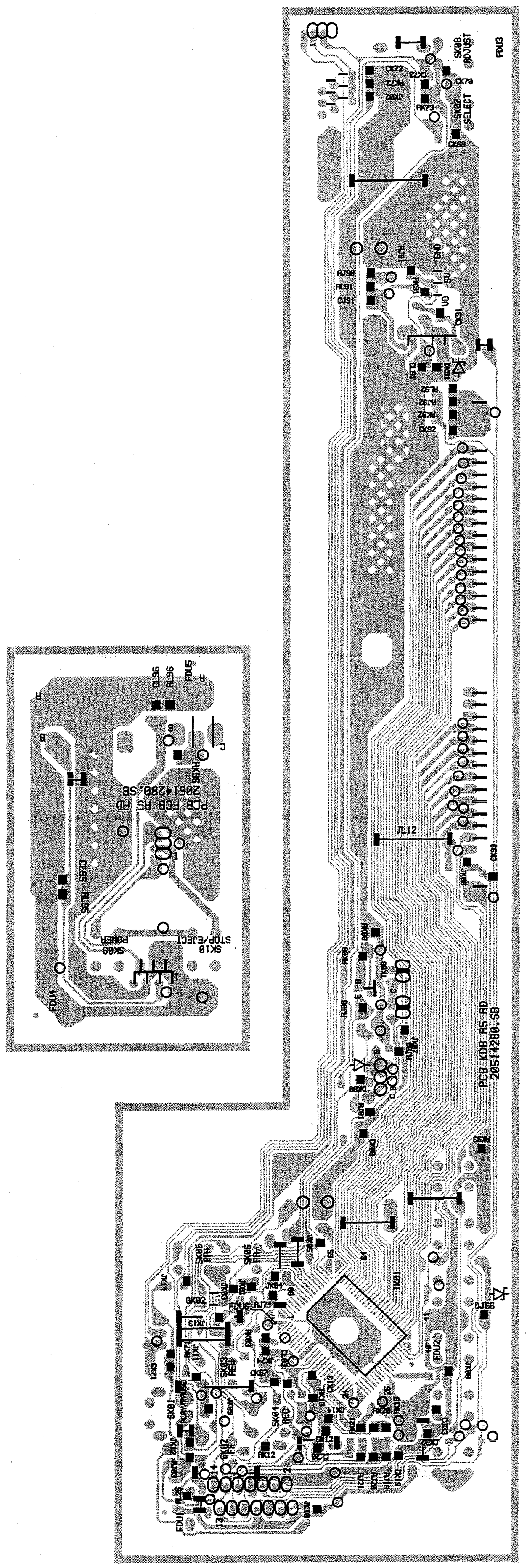

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre

PCB FCB R5000 BT
20383830.00
SK008 POWER
SK009 POWER
SK010 FF
SK011 FF
SK012 RW
SK013 RW
SK014 ADJUST
WK006
PCB KDB R5000 BT
20383830.00
TX200

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(THOMSON: VPH 6600 N)**


Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

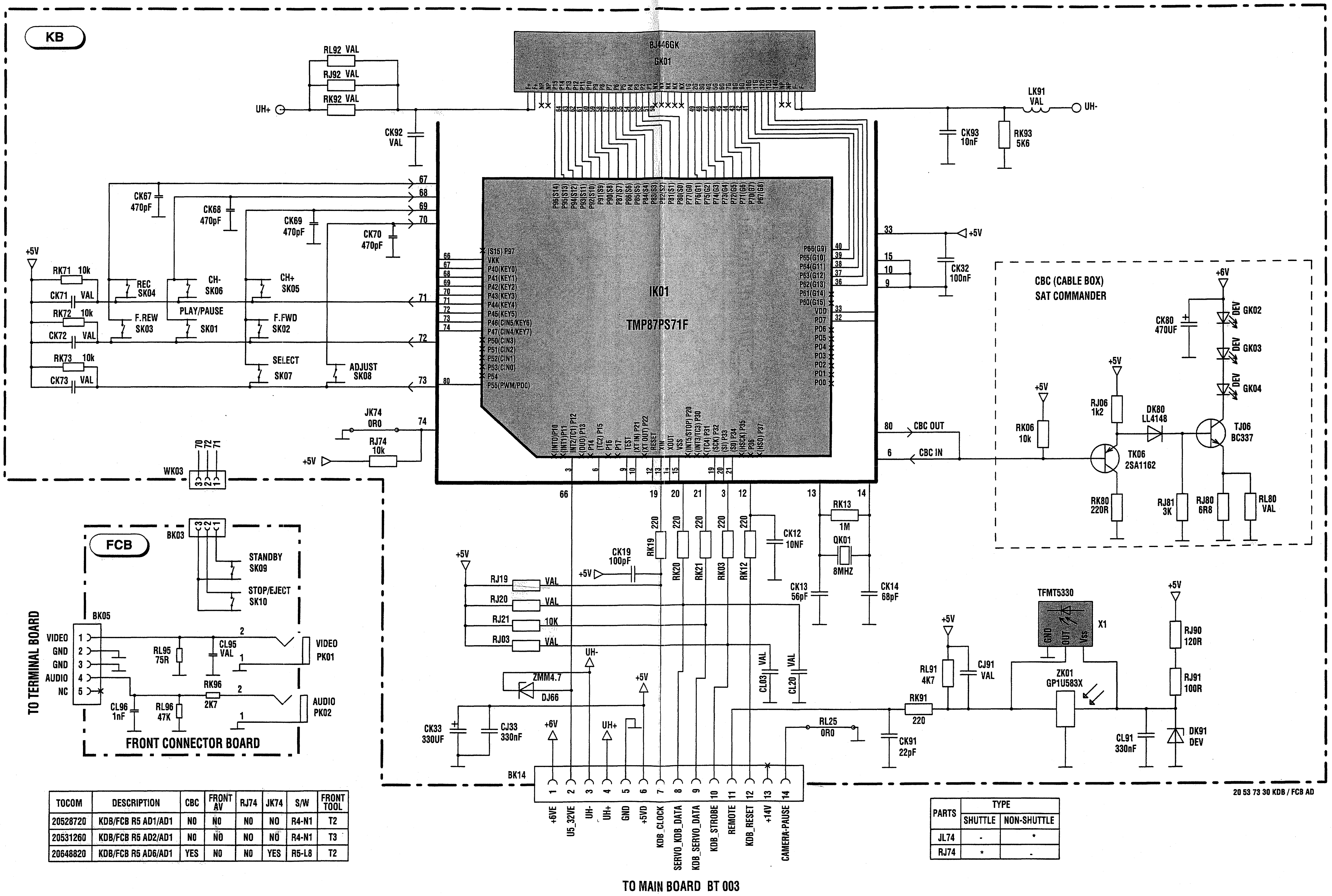
VIDEO INPUT (YELLOW)
AUDIO(L) (WHITE)
AUDIO(R) (RED)
PK01
PK02
PK03
PCB FCB R5 AD
20514280.SB
BK03
BK05
POWER
SK09
STOP/EJECT
SK10
PCB KDB R5 AD
20514280.SB
PLAY/PAUSE
BK14


Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre

PCB FCB R5 AD
20514280.SB
POWER
SK09
STOP/EJECT
SK10
PCB KDB R5 AD
20514280.SB
SK08 ADJUST

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (THOMSON: VPH 6600 N)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


KB
RL92 VAL
RJ92 VAL
RK92 VAL
UH+
BJ446GK
GK01
LK91 VAL
UH-
CK92 VAL
CK93 10nF
RK93 5K6
CK67 470pF
CK68 470pF
CK69 470pF
CK70 470pF
+5V
RK71 10k
CK71 VAL
RK72 10k
CK72 VAL
RK73 10k
CK73 VAL
REC SK04
CH- SK06
CH+ SK05
F.REW SK03
PLAY/PAUSE SK01
F.FWD SK02
SELECT SK07
ADJUST SK08
IK01
TMP87PS71F
(S15) P97
VKK
P40(KEY0)
P41(KEY1)
P42(KEY2)
P43(KEY3)
P44(KEY4)
P45(KEY5)
P46(CIN5/KEY6)
P47(CIN4/KEY7)
P50(CIN3)
P51(CIN2)
P52(CIN1)
P53(CIN0)
P54
P55(PWM/PDO)
P96(S14)
P95(S13)
P94(S12)
P93(S11)
P92(S10)
P91(S9)
P90(S8)
P87(S7)
P86(S6)
P85(S5)
P84(S4)
P83(S3)
P82(S2)
P81(S1)
P80(S0)
P77(G0)
P76(G1)
P75(G2)
P74(G3)
P73(G4)
P72(G5)
P71(G6)
P70(G7)
P67(G8)
P66(G9)
P65(G10)
P64(G11)
P63(G12)
P62(G13)
P61(G14)
P60(G15)
VDD
P07
P06
P05
P04
P03
P02
P01
P00
(INT0)P10
(INT1)P11
INT2/TC1) P12
(DUO) P13
P14
(TC2) P15
P16
P17
TEST
(XT IN) P21
(XT OUT) P22
RESET
XIN
XOUT
VSS
(INT5/STOP) P20
(INT3/TC3) P30
(TC4) P31
(SCK) P32
(SI) P33
(SO) P34
(HSCK) P35
P36
(HSO) P37
JK74 0R0
RJ74 10k
WK03
CK32 100nF
CBC (CABLE BOX)
SAT COMMANDER
+6V
CK80 470UF
GK02 DEV
GK03 DEV
GK04 DEV
CBC OUT
CBC IN
RK06 10k
RJ06 1k2
DK80 LL4148
TJ06 BC337
TK06 2SA1162
RK80 220R
RJ81 3K
RJ80 6R8
RL80 VAL
FCB
BK03
STANDBY SK09
STOP/EJECT SK10
TO TERMINAL BOARD
BK05
VIDEO
GND
GND
AUDIO
NC
RL95 75R
CL95 VAL
VIDEO PK01
RK96 2K7
CL96 1nF
RL96 47K
AUDIO PK02
FRONT CONNECTOR BOARD
RK19 220
RK20 220
RK21 220
RK03 220
RK12 220
CK12 10NF
RK13 1M
QK01 8MHZ
CK13 56pF
CK14 68pF
CK19 100pF
RJ19 VAL
RJ20 VAL
RJ21 10K
RJ03 VAL
ZMM4.7
DJ66
CL03 VAL
CL20 VAL
CK33 330UF
CJ33 330nF
TFMT5330
GND OUT Vss
X1
RL91 4K7
CJ91 VAL
ZK01 GP1U583X
RK91 220
RJ90 120R
RJ91 100R
RL25 0R0
CK91 22pF
CL91 330nF
DK91 DEV
BK14
+6VE
U5_32VE
UH-
UH+
GND
+5VD
KDB_CLOCK
SERVO_KDB_DATA
KDB_SERVO_DATA
KDB_STROBE
REMOTE
KDB_RESET
+14V
CAMERA-PAUSE
TO MAIN BOARD BT 003
20 53 73 30 KDB / FCB AD

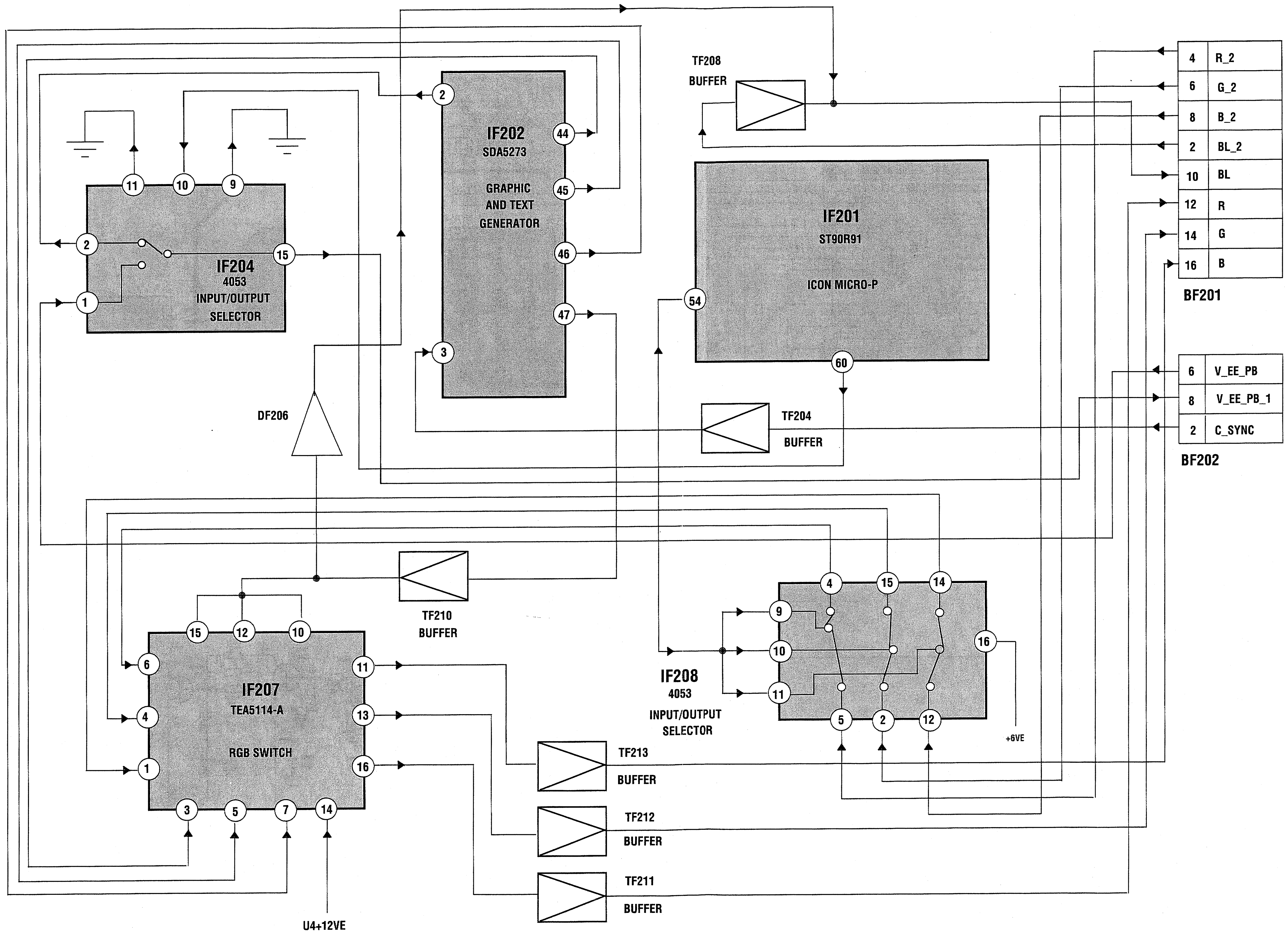
TOCOM	DESCRIPTION	CBC	FRONT AV	RJ74	JK74	S/W	FRONT TOOL
20528720	KDB/FCB R5 AD1/AD1	NO	NO	NO	NO	R4-N1	T2
20531260	KDB/FCB R5 AD2/AD1	NO	NO	NO	NO	R4-N1	T3
20648820	KDB/FCB R5 AD6/AD1	YES	NO	NO	YES	R5-L8	T2

PARTS	TYPE	
	SHUTTLE	NON-SHUTTLE
JL74	-	*
RJ74	*	-

GRAPHIC BOARD (ICONS) - PLATINE GRAPHIQUE (ICONES) - LEITERPLATTE ZEICHENSATZEINBLENDUNG - PIASTRA GRAFICO - PLATINA AGRAFICA

BLOCK DIAGRAM - SCHEMA SYNOPTIQUE - BLOCKSCHALTBILD - SCHEMA A BLOCCHI - ESQUEMA DE BLOQUES

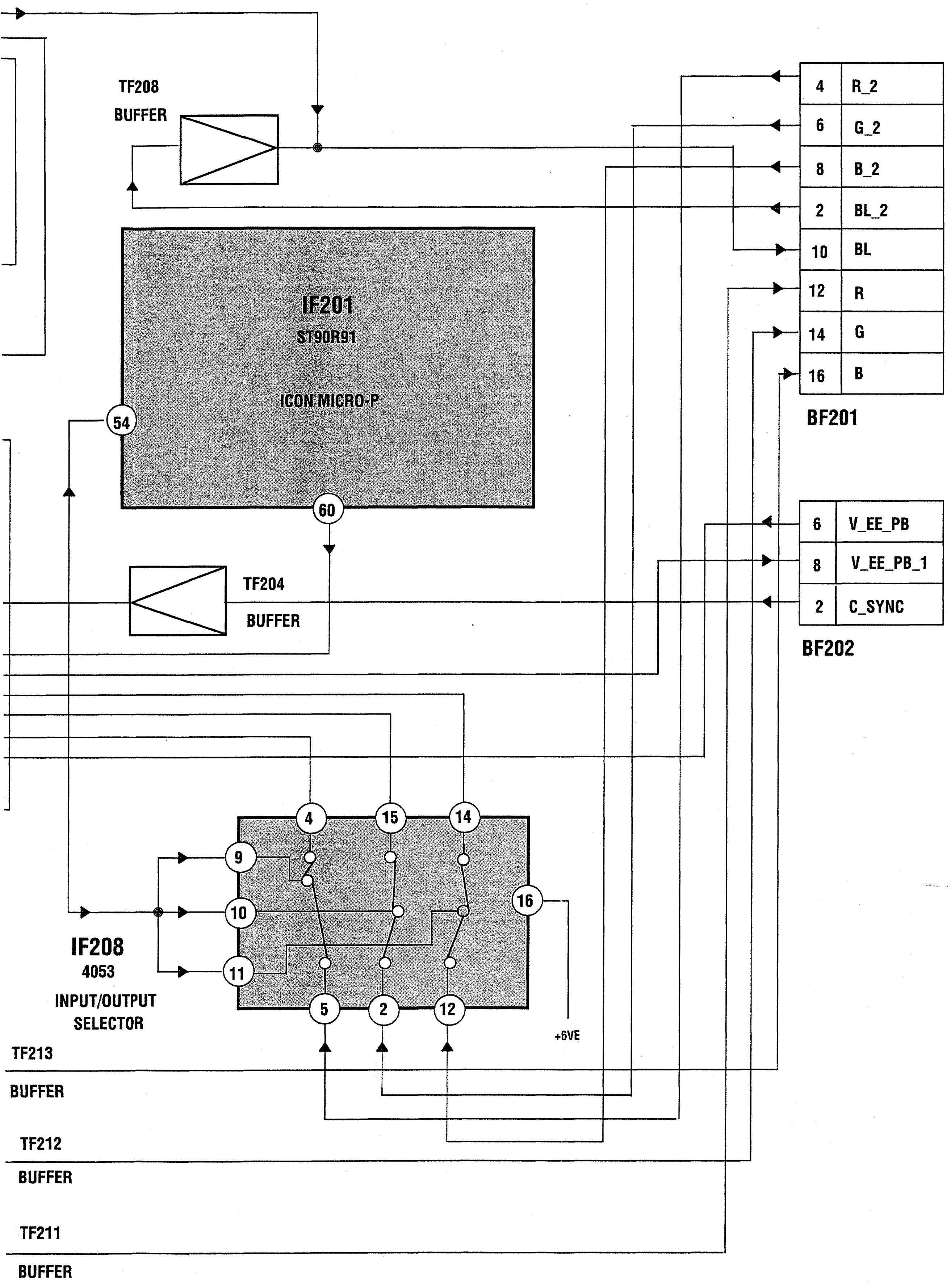
Component side
co



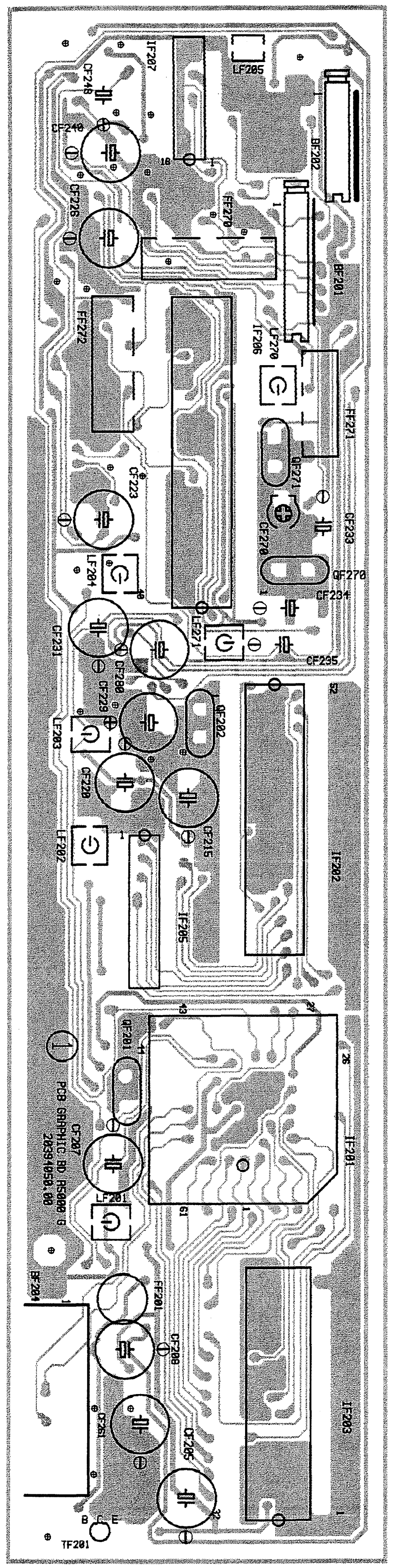
IF204
4053
INPUT/OUTPUT
SELECTOR
11
10
9
2
1
15
IF202
SDA5273
GRAPHIC
AND TEXT
GENERATOR
2
44
45
46
47
3
TF208
BUFFER
IF201
ST90R91
ICON MICRO-P
54
60
DF206
TF204
BUFFER
4
R_2
6
G_2
8
B_2
2
BL_2
10
BL
12
R
14
G
16
B
BF201
6
V_EE_PB
8
V_EE_PB_1
2
C_SYNC
BF202
TF210
BUFFER
IF207
TEA5114-A
RGB SWITCH
15
12
10
6
4
1
11
13
16
3
5
7
14
U4+12VE
IF208
4053
INPUT/OUTPUT
SELECTOR
4
15
14
9
10
11
16
5
2
12
+6VE
TF213
BUFFER
TF212
BUFFER
TF211
BUFFER

ITERPLATTE ZEICHENSATZEINBLENDUNG - PIASTRA GRAFICO - PLATINA AGRAFICA

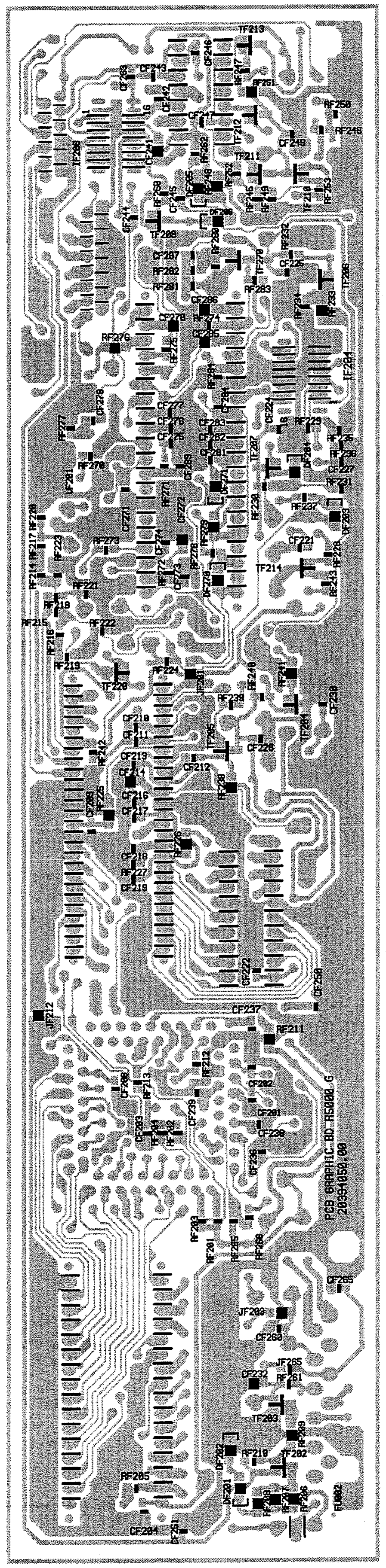
BLOCCHI - ESQUEMA DE BLOQUES


TF208
BUFFER
IF201
ST90R91
ICON MICRO-P
54
60
TF204
BUFFER
4
R_2
6
G_2
8
B_2
2
BL_2
10
BL
12
R
14
G
16
B
BF201
6
V_EE_PB
8
V_EE_PB_1
2
C_SYNC
BF202
4
15
14
9
10
11
16
5
2
12
IF208
4053
INPUT/OUTPUT
SELECTOR
+5VE
TF213
BUFFER
TF212
BUFFER
TF211
BUFFER

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

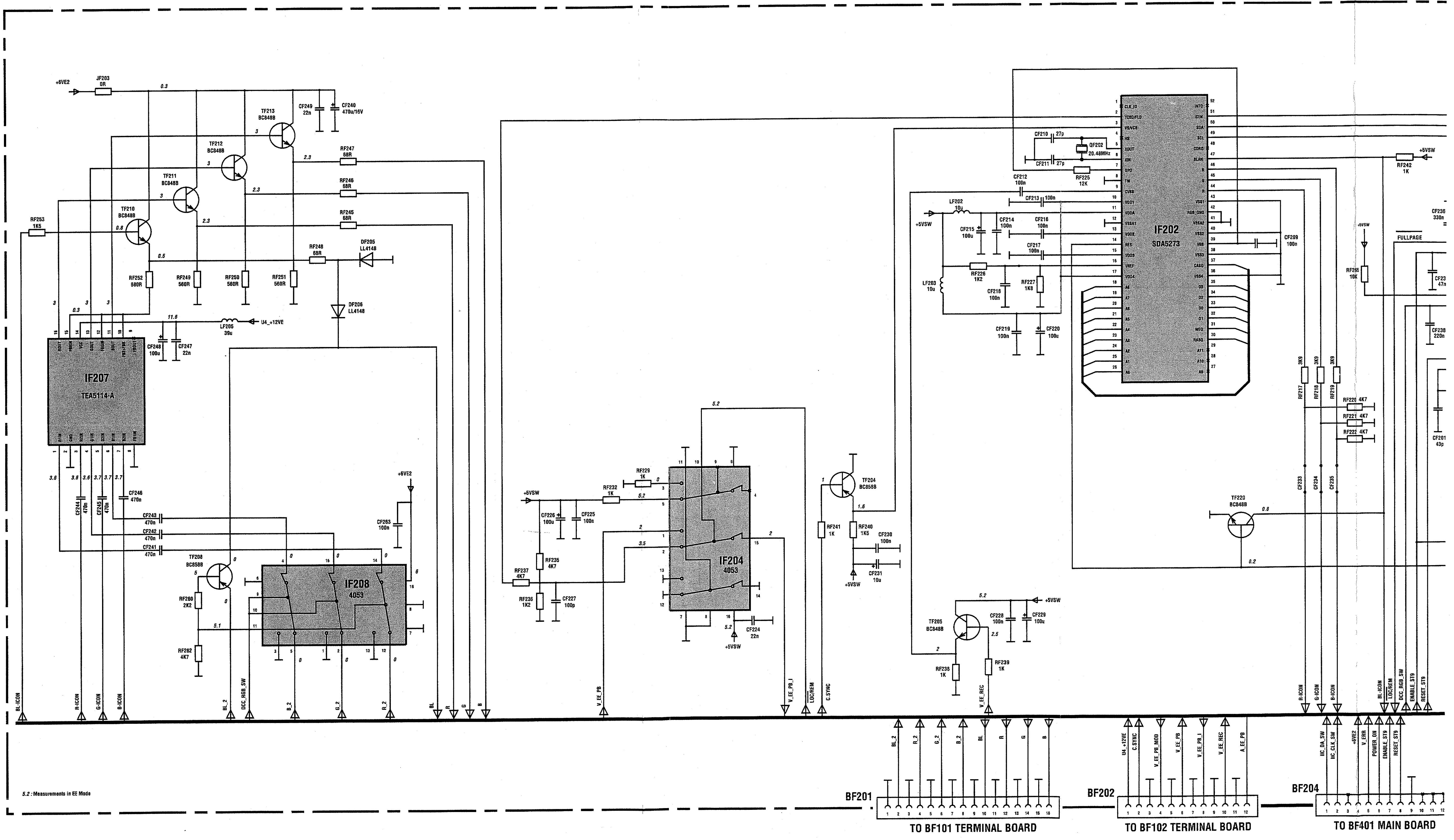


Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre



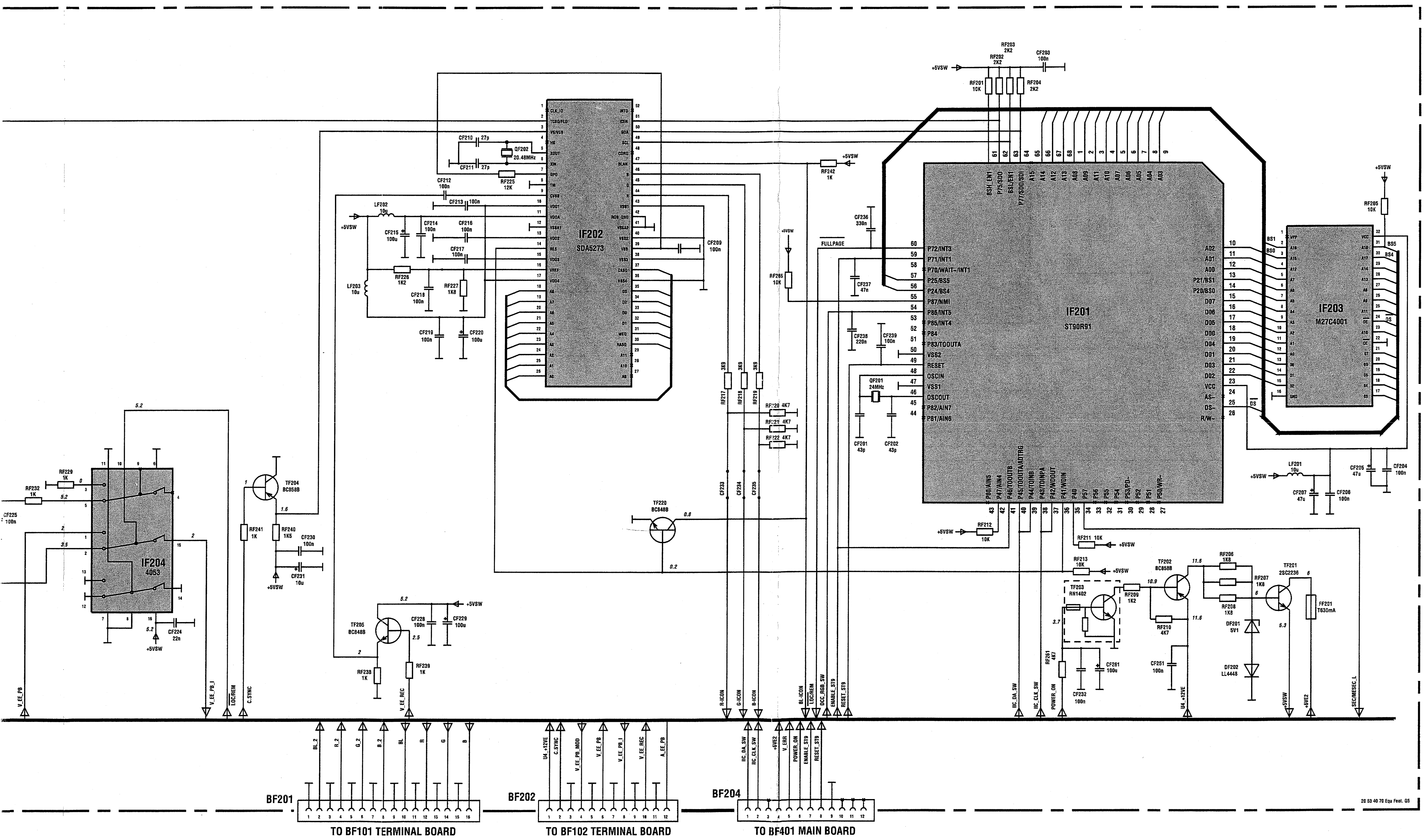
GRAPHIC BOARD (ICONS) - PLATINE GRAPHIQUE (ICONES) - LEITERPLATTE ZEICHENSATZEINBLENDUNG - PIASTRA GRAFICO - PLATINA AGRAFICA (VPH 6697

SCHEMATIC DIAGRAM -SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


+6VE2
JF203 0R
TF213 BC848B
TF212 BC848B
TF211 BC848B
TF210 BC848B
CF249 22n
CF240 470u/16V
RF247 68R
RF246 68R
RF245 68R
RF248 68R
RF253 1K5
DF205 LL4148
DF206 LL4148
RF252 680R
RF249 560R
RF250 560R
RF251 560R
LF205 39u
U4_+12VE
CF248 100u
CF247 22n
IF207
TEA5114-A
CF244 470n
CF245 470n
CF246 470n
CF243 470n
CF242 470n
CF241 470n
TF208 BC858B
RF260 2K2
RF262 4K7
CF263 100n
IF208
4053
BL-ICON
R-ICON
G-ICON
B-ICON
BL_2
DCC_RGB_SW
B_2
G_2
R_2
BL
R
G
B
+5VSW
CF226 100u
CF225 100n
RF232 1K
RF229 1K
RF235 4K7
RF237 4K7
RF236 1K2
CF227 100p
IF204
4053
CF224 22n
V_EE_PB
V_EE_PB_I
LOC/REM
C.SYNC
TF204 BC858B
RF241 1K
RF240 1K5
CF230 100n
CF231 10u
TF205 BC848B
CF228 100n
CF229 100u
RF238 1K
RF239 1K
V_EE_REC
LF202 10u
CF215 100u
CF214 100n
CF216 100n
CF217 100n
CF212 100n
CF213 100n
CF210 27p
CF211 27p
QF202 20.48MHz
RF225 12K
LF203 10u
RF226 1K2
CF218 100n
RF227 1K8
CF219 100n
CF220 100u
IF202
SDA5273
CF209 100n
RF242 1K
FULLPAGE
RF265 10K
CF236 330n
CF238 220n
CF201 43p
RF217 3K9
RF218 3K9
RF219 3K9
RF220 4K7
RF221 4K7
RF222 4K7
CF233
CF234
CF235
TF220 BC848B
ENABLE_ST9
RESET_ST9
IIC_DA_SW
IIC_CLK_SW
V_ERR
POWER_ON
U4_+12VE
V_EE_PB_MOD
A_EE_PB
BF201
BF202
BF204
TO BF101 TERMINAL BOARD
TO BF102 TERMINAL BOARD
TO BF401 MAIN BOARD
5.2 : Measurements in EE Mode

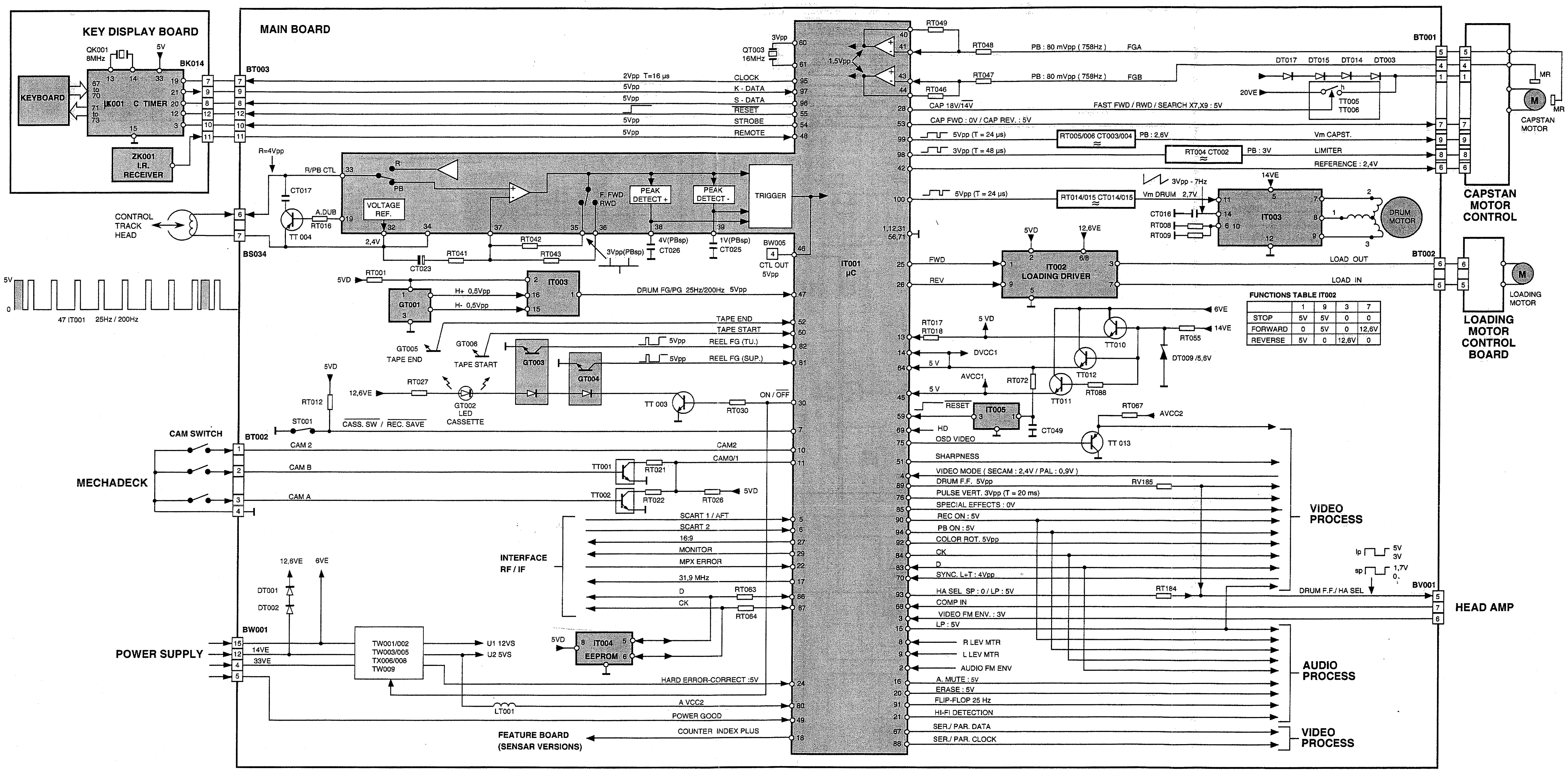
TERPLATTE ZEICHENSATZEINBLENDUNG - PIASTRA GRAFICO - PLATINA AGRAFICA (VPH 6697SENSAR - VPH 6790)

JEMA


IF201
ST90R91
IF202
SDA5273
IF203
M27C4001
IF204
4053
QF201 24MHz
QF202 20.48MHz
TF201 2SC2236
TF202 BC858B
TF203 RN1402
TF204 BC858B
TF205 BC848B
TF220 BC848B
DF201 5V1
DF202 LL4448
FF201 T630mA
LF201 10u
LF202 10u
LF203 10u
+5VSW
FULLPAGE
V_EE_PB
LOC/REM
C.SYNC
V_EE_REC
V_EE_PB_I
R-ICON
G-ICON
B-ICON
BL-ICON
DCC_RGB_SW
ENABLE_ST9
RESET_ST9
IIC_DA_SW
IIC_CLK_SW
POWER_ON
U4_+12VE
+5VE2
SEC/MESEC_L
BL_2
R_2
G_2
B_2
BL
R
G
B
U4_+12VE
C.SYNC
V_EE_PB_MOD
V_EE_PB
V_EE_PB_I
V_EE_REC
A_EE_PB
IIC_DA_SW
IIC_CLK_SW
+5VE2
V_ERR
POWER_ON
ENABLE_ST9
RESET_ST9
BF201
BF202
BF204
TO BF101 TERMINAL BOARD
TO BF102 TERMINAL BOARD
TO BF401 MAIN BOARD
20 53 40 70 Equ Feat. G5

MECHA DECK CONTROL / SERVO CONTROL - GESTION / ASSERVISSEMENTS - MECHANIKSTEUERUNG / SERVO - CONTROLLO MECCANISMO / ASSERVIMENTI - SERVOMECANISMO / GESTIÓN

BLOCK DIAGRAM - SCHEMA SYNOPTIQUE - BLOCKSCHALTBILD - SCHEMA A BLOCCHI - ESQUEMA DE BLOQUES

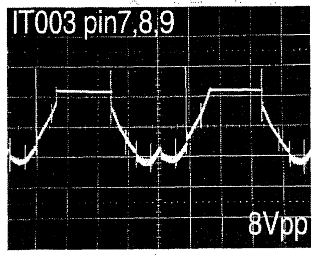

KEY DISPLAY BOARD
KEYBOARD
QK001 8MHz
5V
BK014
IK001 C TIMER
ZK001 I.R. RECEIVER
MAIN BOARD
BT003
CLOCK
K - DATA
S - DATA
RESET
STROBE
REMOTE
2Vpp T=16 µs
5Vpp
QT003 16MHz
3Vpp
1,5Vpp
RT049
RT048
RT047
RT046
PB : 80 mVpp (758Hz)
FGA
FGB
CAP 18V/14V
FAST FWD / RWD / SEARCH X7,X9 : 5V
CAP FWD : 0V / CAP REV. : 5V
5Vpp (T = 24 µs)
3Vpp (T = 48 µs)
RT005/006 CT003/004
PB : 2,6V
Vm CAPST.
RT004 CT002
PB : 3V
LIMITER
REFERENCE : 2,4V
DT017 DT015 DT014 DT003
20VE
TT005 TT006
MR
CAPSTAN MOTOR
BT001
CAPSTAN MOTOR CONTROL
R=4Vpp
R/PB CTL
CT017
A.DUB
RT016
TT 004
VOLTAGE REF.
2,4V
F. FWD
RWD
PEAK DETECT +
PEAK DETECT -
TRIGGER
RT042
RT041
RT043
CT023
3Vpp(PBsp)
4V(PBsp)
CT026
1V(PBsp)
CT025
BW005
CTL OUT 5Vpp
CONTROL TRACK HEAD
BS034
5V
0
47 IT001 25Hz / 200Hz
5VD
RT001
GT001
IT003
H+ 0,5Vpp
H- 0,5Vpp
DRUM FG/PG 25Hz/200Hz 5Vpp
TAPE END
TAPE START
REEL FG (TU.)
REEL FG (SUP.)
GT005 TAPE END
GT006 TAPE START
GT003
GT004
RT027
12,6VE
RT012
GT002 LED CASSETTE
TT 003
RT030
ON / OFF
ST001
CASS. SW / REC. SAVE
CAM SWITCH
BT002
MECHADECK
CAM 2
CAM B
CAM A
CAM2
CAM0/1
TT001
TT002
RT021
RT022
RT026
3Vpp - 7Hz
Vm DRUM 2,7V
RT014/015 CT014/015
14VE
CT016
RT008
RT009
IT003
DRUM MOTOR
IT001 µC
5VD
12,6VE
FWD
REV
IT002 LOADING DRIVER
LOAD OUT
LOAD IN
BT002
LOADING MOTOR
LOADING MOTOR CONTROL BOARD
FUNCTIONS TABLE IT002
6VE
14VE
RT017
RT018
5 VD
DVCC1
AVCC1
RT072
TT010
RT055
DT009 /5,6V
TT012
TT011
RT088
RESET
IT005
CT049
RT067
AVCC2
TT 013
HD
OSD VIDEO
SHARPNESS
VIDEO MODE (SECAM : 2,4V / PAL : 0,9V)
DRUM F.F. 5Vpp
RV185
PULSE VERT. 3Vpp (T = 20 ms)
SPECIAL EFFECTS : 0V
REC ON : 5V
PB ON : 5V
COLOR ROT. 5Vpp
CK
D
SYNC. L+T : 4Vpp
HA SEL SP : 0 / LP : 5V
RT184
DRUM F.F. / HA SEL
COMP IN
VIDEO FM ENV. : 3V
LP : 5V
VIDEO PROCESS
lp 5V 3V
sp 1,7V 0
BV001
HEAD AMP
R LEV MTR
L LEV MTR
AUDIO FM ENV
A. MUTE : 5V
ERASE : 5V
FLIP-FLOP 25 Hz
HI-FI DETECTION
AUDIO PROCESS
SER./ PAR. DATA
SER./ PAR. CLOCK
VIDEO PROCESS
SCART 1 / AFT
SCART 2
16:9
MONITOR
MPX ERROR
31,9 MHz
D
CK
RT063
RT064
INTERFACE RF / IF
12,6VE
6VE
DT001
DT002
BW001
POWER SUPPLY
14VE
33VE
TW001/002 TW003/005 TX006/008 TW009
U1 12VS
U2 5VS
5VD
IT004 EEPROM
HARD ERROR-CORRECT :5V
A VCC2
LT001
POWER GOOD
COUNTER INDEX PLUS
FEATURE BOARD (SENSAR VERSIONS)

FUNCTIONS TABLE IT002

	1	9	3	7
STOP	5V	5V	0	0
FORWARD	0	5V	0	12,6V
REVERSE	5V	0	12,6V	0

MEASUREMENTS MECHA DECK CONTROL / SERVO CONTROL - MESURES GESTION / ASSERVISSEMENTS - MESSUNGEN MECHANIKSTEUERUNG / SERVO - MISURI CONTROLLO MECCANISMO / ASSERVIMENTI - MEDIDAS SERVOMECANISMO / GESTIÓN

SERVO		MODE	
LOC	PIN	PLAY	REC.
IT001	1	0	0
	2	0.4	2.3
	3	2,1	0
	4	3.4	0
	5	1.9	0
	6	0	0
	7	0	4.9
	8	0	3.7
	9	0.1	3.7
	10	0	0
	11	2	2
	12	0	0
	13	4.9	4.9
	14	4.8	4.8
	15	0	2.1
	16	0	0
	17	0	0
	18	0	0
	19	4.8	0
	20	0	0
	21	4.4	0
	22	5.1	0
	23	4.8	0
	24	4.9	4.9
	25	4.8	4.8
	26	4.8	4.8
	27	0	0
	28	0	0
	29	4.7	0
	30	4.6	0
	31	0	0
	32	2.4	2.4
	33	2.4	2.8
	34	2.4	2.4
	35	2.4	2.4
	36	2.4	2.4
	37	2.4	2.4
	38	3.8	2.4
	39	0.9	2.2
	40	2.4	2.4
	41	2.4	2.4
	42	2.4	2.4
	43	2.4	2.4
	44	0	2.4
	45	4.8	4.8
	46	4.8	4.8
	47	1.2	1.2
	48	4.9	4.9
	49	5	0
	50	4.9	4.8
	51	1.8	1.6
	52	4.9	5
	53	0	0
	54	4	2.1
	55	4.8	4.8
	56	0	0
	57	2.1	3.3
	58	2.5	2.5
	59	4.8	4.8
	60	2.3	2.3
	61	2	2
	62	4.8	4.8
	63	2.2	0.5
	64	4.8	4.8
	65	0	0
	66	0	0
	67	0	0
	68	4.7	0
	69	4.7	4.7
	70	0.7	0.7
	71	0	0
	72	0	0
	73	0.8	0
	74	0	0
	75	1.3	1.3
	76	1.8	1.8
	77	1.5	0.2
	78	2.2	2.2
	79	2.2	2.2
	80	5.1	5.1
	81	-	-
	82	-	-
	83	4.9	4.9
	84	4.9	4.9
	85	4.8	4.8
	86	4.5	4.5
	87	4.6	4.6
	88	4.8	4.8
	89	2.3	2.3
	90	0	4.8
	91	2.4	2.4
	92	2.4	2.4
	93	4.7	0
	94	4.7	0
	95	4.3	4.3
	96	2.6	2.6
	97	4.3	4.3
	98	1.5	1.5
	99	2.5	2.5
	100	2.7	2.7
IT002	1	4.6	4.6
	2	4.9	4.9
	3	0.5	0.5
	4	-	-
	5	0	0
	6	12.4	12.4
	7	0.5	0.5
	8	12.4	12.4
	9	4.6	4.6
IT003	1	1.3	1.3
	2	1.4	1.4
	3	0	0
	4	0	0
	5	13.1	13.1
	6	0	0
	7	10	10
	8	10	10
	9	10	10
	10	0	0
	11	2.7	2.7
	12	0	0
	13	5	5
	14	3.2	3.2
	15	0.6	0.6
	16	0.8	0.8
IT004	1	0	0
	2	0	0
	3	0	0
	4	0	0
	5	4.5	4.5
	6	4.7	4.7
	7	0	0
	8	4.9	4.9
IT005	1	4.8	4.8
	2	0	0
	3	4.8	4.8
TT001	E	0	0
	B	4.5	4.5
	C	0	0
TT002	E	0	0
	B	4.5	4.5
	C	0	0
TT003	E	0	0
	B	0.7	0.7
	C	0	0
TT004	E	2.3	2.3
	B	4.8	4.8
	C	0	0
TT005	E	23.3	23.3
	B	22.7	22.7
	C	10.7	10.7
TT006	E	0	0
	B	0	0
	C	22	22
TT010	E	4.9	4.9
	B	5.6	5.6
	C	5.8	5.8
TT011	E	4.8	4.8
	B	5.5	5.5
	C	5.7	5.7
TT012	E	4.8	4.8
	B	5.6	5.6
	C	5.7	5.7
TT013	E	2	2
	B	1.3	1.3
	C	0	0



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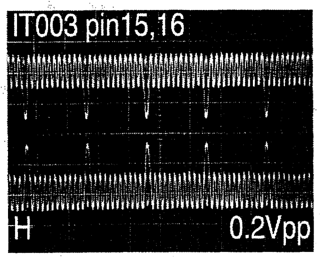

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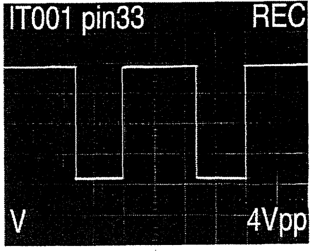

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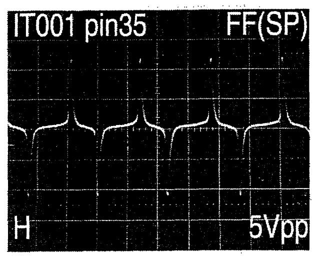

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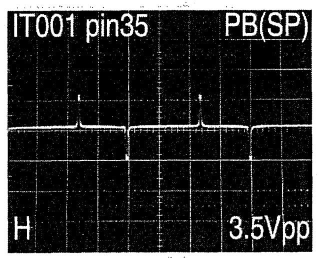

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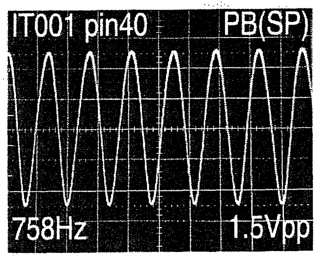

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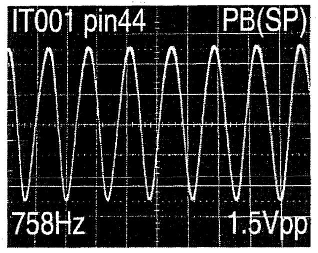

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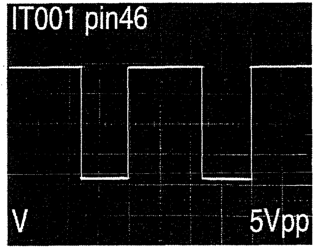

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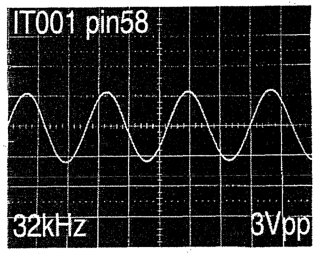

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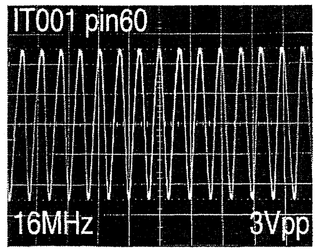

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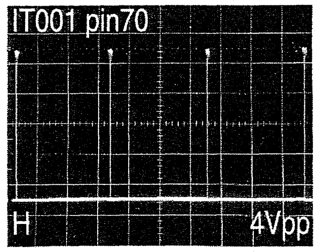

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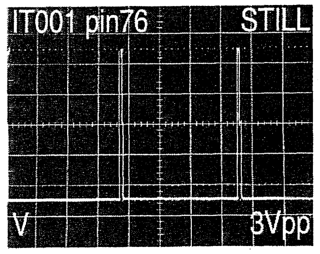
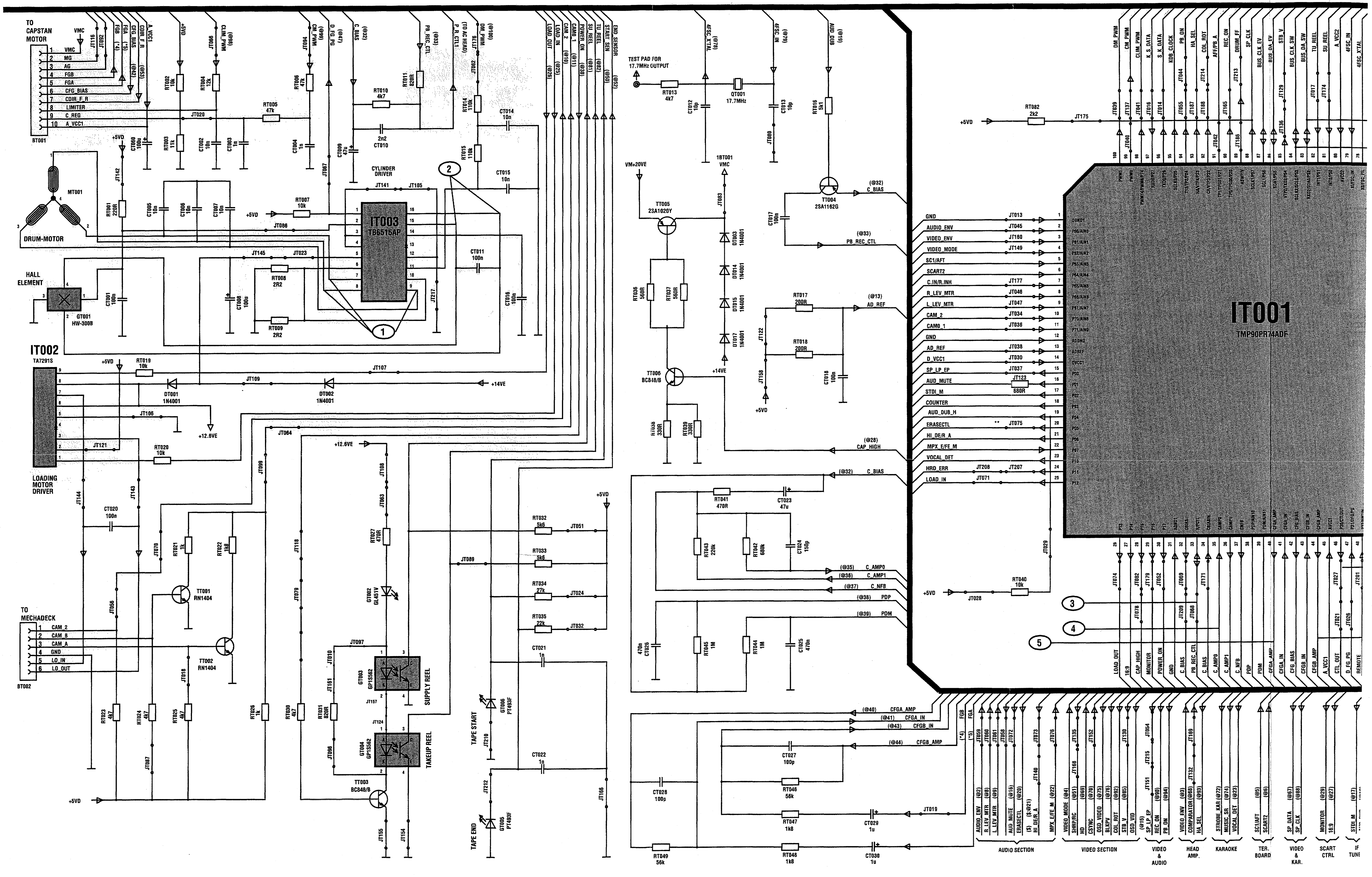
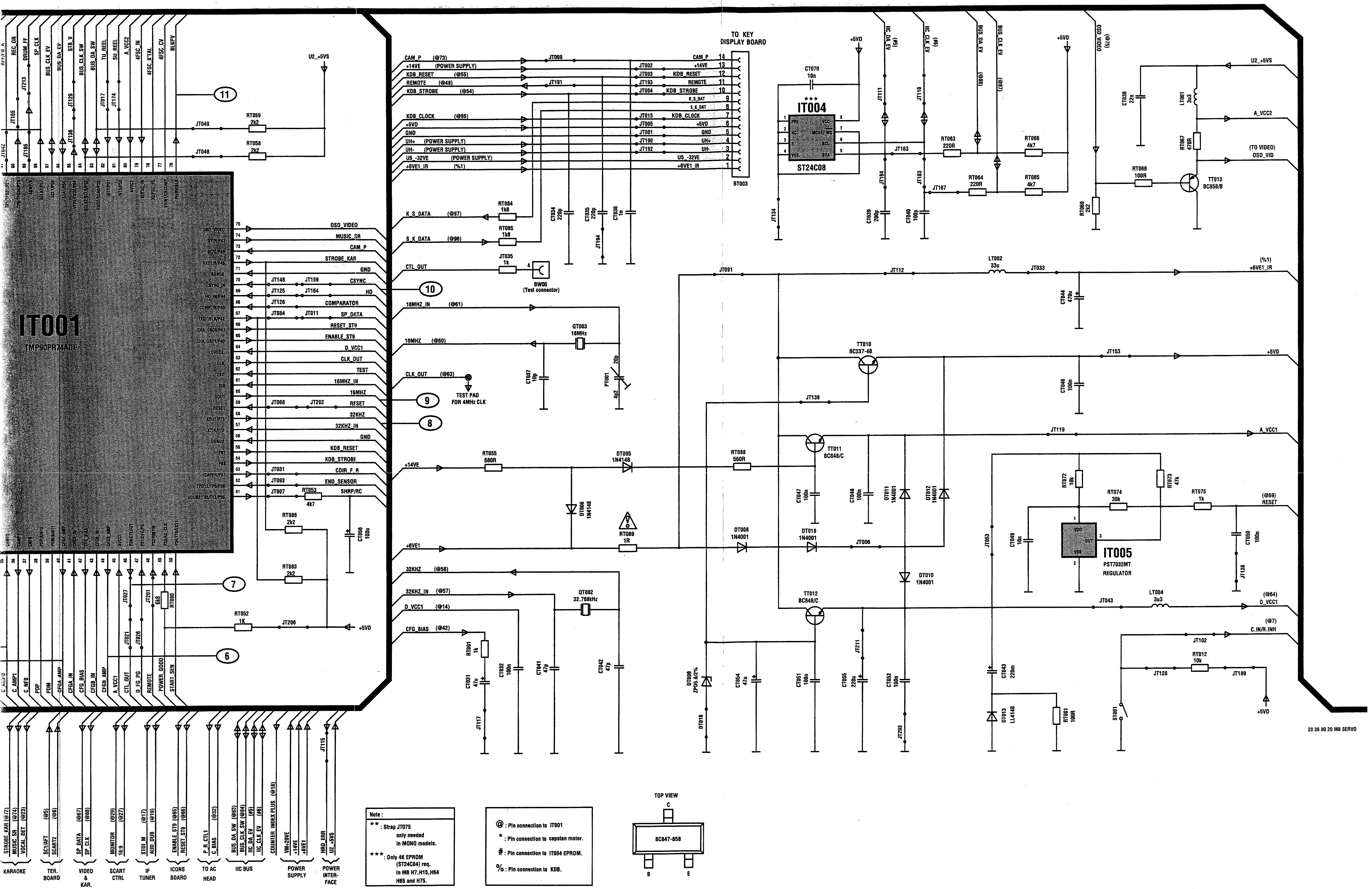


⑫

MECHA DECK CONTROL / SERVO CONTROL - GESTION / ASSERVISSEMENTS - MECHANIKSTEUERUNG / SERVO - CONTROLLO MECCANISMO / ASSERVIMENTI - SER

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

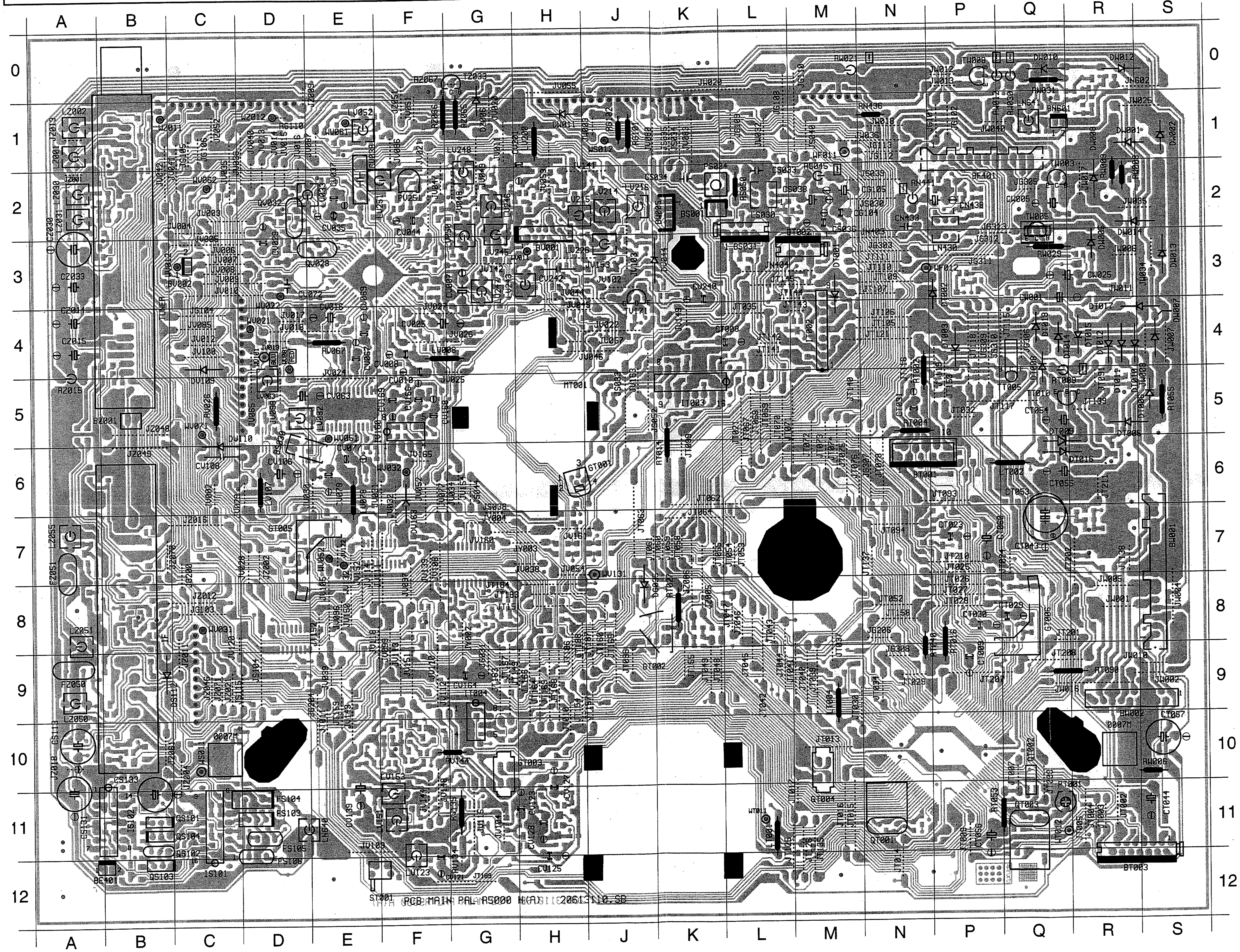

TO CAPSTAN MOTOR
VMC
MG
AG
FGB
FGA
CFG_BIAS
CDIR_F_R
LIMITER
C_REG
A_VCC1
BT001
MT001
DRUM-MOTOR
HALL ELEMENT
GT001
HW-300B
IT002
TA7291S
LOADING MOTOR DRIVER
IT003
TB6515AP
CYLINDER DRIVER
TO MECHADECK
CAM_2
CAM_B
CAM_A
GND
LO_IN
LO_OUT
BT002
TT001
RN1404
TT002
RN1404
TT003
BC848/B
GT002
GL451V
GT003
GP1S562
SUPPLY REEL
GT004
GP1S562
TAKEUP REEL
TAPE START
GT006
PT493F
TAPE END
GT005
PT493F
TEST PAD FOR 17.7MHz OUTPUT
QT001
17.7MHz
VM+20VE
TT005
2SA1020Y
TT006
BC848/B
TT004
2SA1162G
IT001
TMP90PR74ADF
+5VD
+14VE
+12.6VE
C_BIAS
PB_REC_CTL
AD_REF
CAP_HIGH
C_AMP0
C_AMP1
C_NFB
PDP
PDM
CFGA_AMP
CFGA_IN
CFGB_IN
CFGB_AMP
AUDIO SECTION
VIDEO SECTION
VIDEO & AUDIO
HEAD AMP.
KARAOKE
TER. BOARD
VIDEO & KAR.
SCART CTRL
IF TUNE
1
2
3
4
5


IT001
TMP90PR74ADF
IT004
ST24C08
IT005
PST7032MT
REGULATOR
TO KEY DISPLAY BOARD
BT003
BW05 (Test connector)
TEST PAD FOR 4MHz CLK
QT003 16MHz
QT002 32.768kHz
TT010 BC337-40
TT011 BC848/C
TT012 BC848/C
TT013 BC858/B
TOP VIEW
BC847-858
C
B
E
CAM_P (@73)
+14VE (POWER SUPPLY)
KDB_RESET (@55)
REMOTE (@48)
KDB_STROBE (@54)
KDB_CLOCK (@95)
+5VD
GND
UH+ (POWER SUPPLY)
UH- (POWER SUPPLY)
U5_-32VE (POWER SUPPLY)
+6VE1_IR (%1)
K_S_DATA (@97)
S_K_DATA (@96)
CTL_OUT
16MHZ_IN (@61)
16MHZ (@60)
CLK_OUT (@63)
+14VE
+6VE1
32KHZ (@58)
32KHZ_IN (@57)
D_VCC1 (@14)
CFG_BIAS (@42)
OSD_VIDEO
MUSIC_SR
STROBE_KAR
CSYNC
HD
COMPARATOR
SP_DATA
RESET_ST9
ENABLE_ST9
D_VCC1
CLK_OUT
TEST
16MHZ_IN
16MHZ
RESET
32KHZ
32KHZ_IN
KDB_RESET
KDB_STROBE
CDIR_F_R
END_SENSOR
SHRP/RC
IIC_DA_EV (#5)
IIC_CLK_EV (#6)
BUS_DA_EV (@86)
BUS_CLK_EV (@87)
OSD_VIDEO (@75)
U2_+5VS
A_VCC2
(TO VIDEO) OSD_VID
(%1) +6VE1_IR
+5VD
A_VCC1
(@59) RESET
(@64) D_VCC1
(@7) C.IN/R.INH
REC_ON
DRUM_FF
SP_CLK
BUS_CLK_EV
BUS_DA_EV
STB_V
BUS_CLK_SW
BUS_DA_SW
TU_REEL
SU_REEL
A_VCC2
4FSC_IN
4FSC_XTAL
4FSC_CV
BLKPV
C_AMP1
C_NFB
PDP
PDM
CFGA_AMP
CFGA_IN
CFG_BIAS
CFGB_IN
CFGB_AMP
A_VCC1
CTL_OUT
D_FG_PG
REMOTE
POWER_GOOD
START_SEN
STROBE_KAR (@72)
MUSIC_SR (@74)
VOCAL_DET (@23)
SC1/AFT (@5)
SCART2 (@6)
SP_DATA (@67)
SP_CLK (@88)
MONITOR (@29)
16:9 (@27)
STDI_M (@17)
AUD DUB (@19)
ENABLE_ST9 (@65)
RESET_ST9 (@66)
P_R_CTL1
C_BIAS (@32)
BUS_DA_SW (@83)
BUS_CLK_SW (@84)
IIC_DA_EV (#5)
IIC_CLK_EV (#6)
COUNTER INDEX PLUS (@18)
VM+20VE
+14VE
+6VE1
HRD_ERR
U2_+5VS
KARAOKE
TER. BOARD
VIDEO & KAR.
SCART CTRL
IF TUNER
ICONS BOARD
TO AC HEAD
IIC BUS
POWER SUPPLY
POWER INTER-FACE
20 38 80 20 MB SERVO

Note :
** : Strap JT075 only needed in MONO models.
*** : Only 4K EPROM (ST24C04) req. in MB H7,H15,H64 H65 and H75.

@ : Pin connection to IT001
* : Pin connection to capstan motor.
# : Pin connection to IT004 EPROM.
% : Pin connection to KDB.

Main P.C.B. components side • Circuit imprimé de la platine principale côté composants • Hauptleiterplatte Bestückungsseite
Piastra principale lato componenti • Platina principal lado componentes



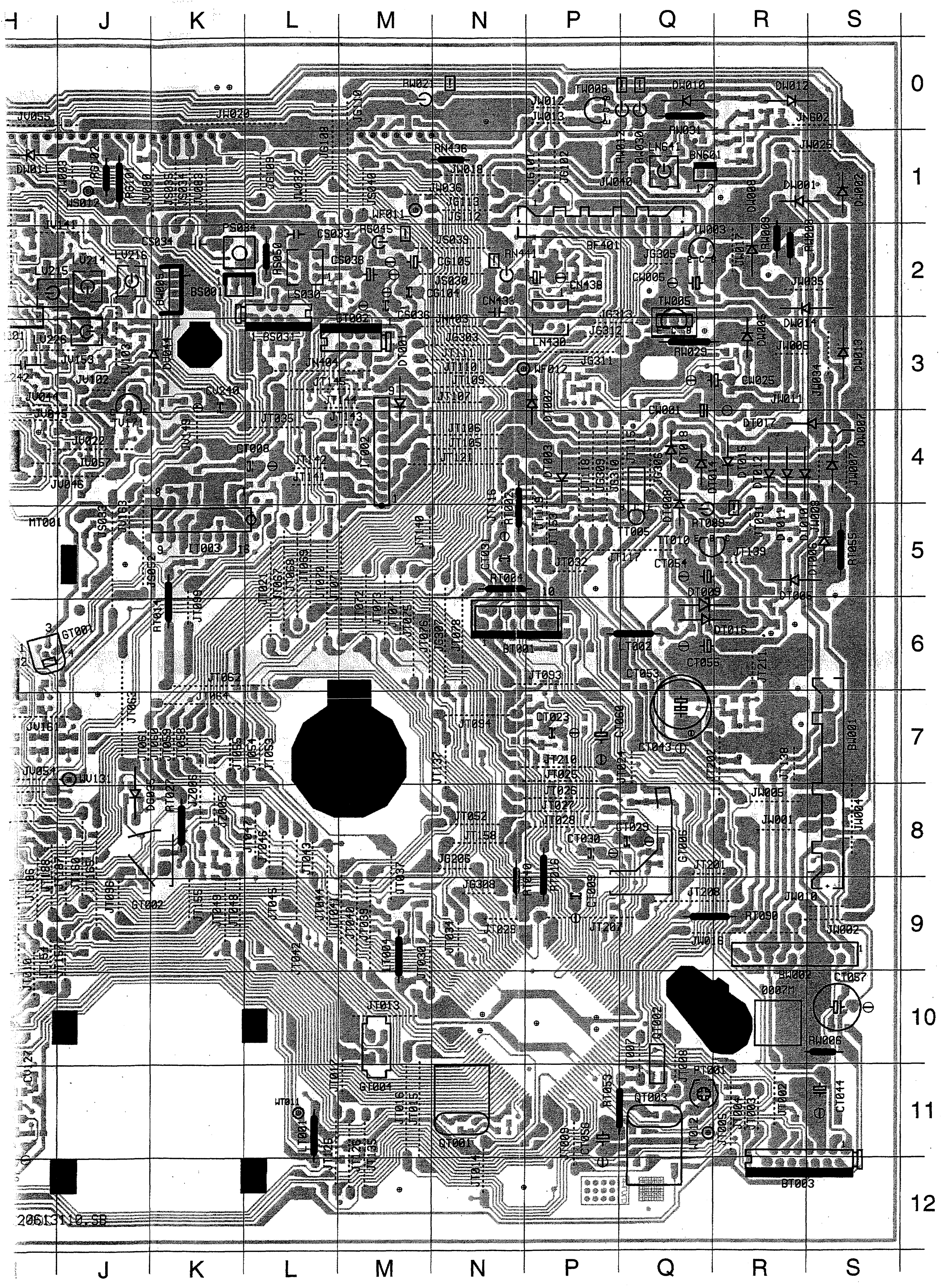
CC

1 2

BE401
BE401*
BF401
BF401*
BN601
BN601*
BS001
BS001*
BS030
BS030*
BS031
BS031*
BT001
BT001*
BT002
BT002*
BT003
BT003*
BV001
BV001*
BV002
BV002*
BW001
BW001*
BW002
BW005
BW005*

CF401*
CG101*
CG102*
CJ104
CJ105
CN431*
CN433
CN436*
CN438
CN438*
CN637*
CN640*
CN643*
CN644*
CN645*
CN646*
CS030*
CS031*
CS033
CS034
CS036
CS038
CS101*
CS102*
CS103*
CS104*
CS112*
CS113
CS116*
CS118*
CS121*
CS122*
CS123*
CS124*
CS131
CS132*
CS133
CS134*
CS135*
CT001*
CT002*
CT003*
CT004*
CT005*
CT006*

atine principale côté composants • Hauptleiterplatte Bestückungsseite
onenti • Platina principal lado componentes



COMPONENTS LOCATION - LOCALISATION DES ELEMENTS - LAGE DER BAUTEILE LOCALIZZAZIONE DEGLI ELEMENTI - LOCALIZACION DE LOS COMPONENTS

* SOLDER SIDE - COTE CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE

1 2 3

BE401	B12
BE401*	S0
BF401	P2
BF401*	D10
BN601	Q1
BN601*	B11
BS001	K2
BS001*	H10
BS030	D5
BS030*	P7
BS031	L3
BS031*	H10
BT001	N6
BT001*	D7
BT002	M2
BT002*	G10
BT003	R12
BT003*	A0
BV001	H3
BV001*	K10
BV002	C3
BV002*	Q9
BW001	S7
BW001*	A5
BW002	R9
BW005	K2
BW005*	H10

CF401*	D11
CG101*	R10
CG102*	R9
CJ104	N2
CJ105	N2
CN431*	D10
CN433	N2
CN436*	D10
CN438	P2
CN438*	D10
CN637*	P2
CN640*	C11
CN643*	B11
CN644*	B12
CN645*	C12
CN646*	C11
CS030*	G10
CS031*	G11
CS033	L2
CS034	J2
CS036	M2
CS038	L2
CS101*	Q1
CS102*	Q1
CS103*	Q1
CS104*	Q1
CS112*	R2
CS113	A10
CS116*	S1
CS118*	R1
CS121*	S1
CS122*	S3
CS123*	R1
CS124*	R2
CS131	A11
CS132*	Q1
CS133	B10
CS134*	Q2
CS135*	M11
CT001*	H8
CT002*	E7
CT003*	D7
CT004*	E6
CT005*	J7
CT006*	J8

CT007*	J7
CT008	L4
CT009	P9
CT010*	G9
CT011*	H7
CT012*	E1
CT013*	E1
CT014*	H7
CT015*	H8
CT016*	H8
CT017*	E5
CT018*	F3
CT020*	F8
CT021*	C5
CT022*	P5
CT023	P7
CT024*	D5
CT025*	D6
CT026*	D5
CT027*	C4
CT028*	D3
CT029	P8
CT030	P8
CT031	N5
CT032*	F2
CT034*	C2
CT035*	C1
CT036*	C1
CT037*	C1
CT038*	G1
CT039*	L2
CT040*	L3
CT041*	C2
CT042*	C2
CT043	Q7
CT044	S11
CT045*	C7
CT046*	C7
CT047*	B7
CT048*	B7
CT049*	B5
CT050*	C5
CT051*	C7
CT052*	C6
CT053	Q6
CT054	Q5
CT055	Q6
CT056	P11
CT060	P7
CT070*	L3
CV001*	M9
CV002*	M9
CV004*	L8
CV005	F4
CV006*	L8
CV007	F3
CV008	F4
CV009*	M8
CV010	F4
CV011*	M9
CV013*	N8
CV016	E3
CV022*	N9
CV025*	P9
CV029	D2
CV030*	P10
CV032*	N10
CV034*	N10
CV035	E2
CV036*	N10
CV037	E2
CV038	E1
CV039*	N10
CV041*	M10
CV042*	M10
CV044	F2
CV045*	M10
CV046*	L9
CV047*	M9
CV048*	M10
CV049*	M9

CV050*	L10
CV051*	M11
CV052*	N11
CV053*	N11
CV054*	N12
CV055*	N12
CV062*	P8
CV063	E5
CV064*	N8
CV065*	N8
CV067	E4
CV069	E3
CV071*	N8
CV072	E3
CV074*	N6
CV076*	N7
CV077	E5
CV078*	N7
CV079	E6
CV082*	P7
CV083*	P7
CV103*	P7
CV106	D6
CV107*	P6
CV108	C6
CV121	G12
CV122*	L2
CV123	H11
CV124*	M0
CV125	H12
CV126*	K1
CV127	H10
CV128	H11
CV135*	M2
CV139	E10
CV140*	N2
CV141*	M2
CV150*	M1
CV151*	M1
CV152*	M1
CV153*	N2
CV154*	N1
CV155*	N1
CV156*	N1
CV161*	M6
CV163*	M7
CV164	G9
CV165*	M7
CV166	F5
CV167*	M7
CV168	F5
CV169	F5
CV170*	P4
CV171*	N5
CV182*	K10
CV184*	K10
CV189*	J8
CV200*	K11
CV201	G1
CV202*	K10
CV206*	J11
CV212*	K10
CV213*	K10
CV214*	J10
CV215*	J10
CV219*	J9
CV222*	K9
CV224*	J9
CV226*	J10
CV240	K3
CV241*	L9
CV242	H3
CV243*	L9
CV244*	L10
CV245*	L10
CV246*	L10
CV247*	L9
CV248*	L10
CV249*	L11
CV250*	L10
CV251*	M10

CV252*	N11
CV254*	L11
CW001	Q3
CW005	Q2
CW007*	B10
CW025	R3
CY001*	L4
CY002*	L4
CY003*	L4
CY004*	M4
CZ005*	R6
CZ010*	R3
CZ013*	S8
CZ014	A4
CZ015	A4
CZ019*	Q4
CZ021*	S8
CZ030	A3
CZ033	A3
CZ034*	S10
CZ035*	R9
CZ036*	S10
CZ055*	S5
CZ056*	S6

DG030*	Q5
DG034*	M4
DG035	J8
DS112	B9
DT001	M3
DT002	P4
DT003	P4
DT005	R5
DT006	S5
DT008	Q4
DT009	Q5
DT010	R5
DT011	R5
DT012	R4
DT013*	B5
DT014	Q4
DT015	R4
DT016	Q6
DT017	R3
DT018	Q4
DV003	F6
DV029*	P9
DV039*	M10
DV044	K3
DV048*	L9
DV082*	P5
DV109	C4
DV110	C5
DV123*	K1
DV126*	P5
DV163	F6
DV182*	L10
DV186*	K8
DV202*	K10
DW001	R1
DW002	S1
DW005	R3
DW006*	B9
DW007	S4
DW008	R1
DW010	Q0
DW011	H1
DW012	R0
DW013	S3
DW014	R2
DZ001*	S11
DZ002*	R4
DZ003*	R4
DZ004*	R4
DZ005*	R3

FS103	D11
FS104	D11
FS105	D11
FS106	D11
FU01*	P0
FU02*	A11
FU03*	N9
FU04*	N9
FU05*	D2
FU06*	D3
FU07*	C1
FZ050	A9
FZ051	A7

IS101	C12
IS101*	Q1
IS102	B11
IS102*	R2
IT001*	D3
IT002	M4
IT002*	F8
IT003	K5
IT003*	H7
IT004	G9
IT004*	L3
IT005*	B5
IV001*	M9
IV060*	M7
IV100*	P7
IV120*	L1
IV160	E5
IV160*	M7
IV170*	P4
IV171*	M5
IY001*	L5

JG031	G9
JG036*	L3
JG037*	M3
JG101	N1
JG102	P1
JG103	C8
JG104	C4
JG105	C1
JG106	C1
JG107*	R11
JG108	L1
JG109	L1
JG110	M0
JG112	N1
JG113	N1
JG200	C7
JG201*	P3
JG202*	S7
JG203*	P3
JG204	E9
JG205*	K4
JG206	N8
JG303	N3
JG305	Q2
JG306	Q4
JG307	M6
JG308	N8
JG309	P4
JG310	P4
JG311	P3
JG312	P3
JG313	P3
JN401*	E10
JN403	N2
JN404	L3
JN602	R0

JN603*	B12
JS030	N2
JS031*	G10
JS033	J5
JS034	K1
JS035	K1
JS036*	K5
JS037*	K6
JS038	G6
JS039	N2
JS040	M1
JS043*	G9
JS044	G6
JS050*	K6
JS051*	J6
JS052	J5
JS101*	P1
JS102*	R1
JS103*	Q1
JS104	D9
JS107*	R2
JS108*	S2
JS109*	S2
JS110*	G11
JS112*	R0
JS113*	R1
JS115	C9
JS116*	R1
JT001*	A2
JT002	R11
JT003	R11
JT004	R11
JT005	R11
JT006*	B8
JT007	Q10
JT008	Q10
JT009	P11
JT010	H9
JT011	E9
JT013	M10
JT014	N11
JT015	M11
JT016	M11
JT017	L11
JT018*	G9
JT019*	D6
JT020*	D6
JT021	L5
JT023*	H8
JT024	P7
JT025	P7
JT026	P7
JT027	P8
JT028	P8
JT029	N9
JT030	M9
JT031*	D6
JT032	P5
JT033*	C6
JT034	N9
JT035	L3
JT036*	F3
JT037	M8
JT038*	F3
JT039	M9
JT040	M9
JT041	L9
JT042	L9
JT043	L8
JT044	L9
JT045	L9
JT046	L8
JT047	L8
JT048	K9
JT049	K9
JT051*	L3
JT052	N8
JT053	L7
JT054	L7
JT055	K7
JT056*	G8

JT058	K7
JT059	K7
JT060	K7
JT061	J7
JT062	K6
JT063	J7
JT064	K6
JT066*	H6
JT067	L5
JT068	L5
JT069	L5
JT070	L5
JT071	L5
JT072	M6
JT073	M6
JT074	M6
JT075	M6
JT076	M6
JT078	N6
JT079*	D6
JT080*	E1
JT082*	E5
JT083*	E8
JT084*	K0
JT086*	G8
JT087*	G8
JT089*	J3
JT091	R5
JT092*	E5
JT093	P6
JT094	N7
JT096	J9
JT097*	K3
JT099	K6
JT102*	K3
JT105	N4
JT106	N4
JT107	N3
JT108*	E9
JT109	N3
JT110	N3
JT111	N3
JT112*	B6
JT115	Q4
JT116	N4
JT117	P5
JT118	P4
JT119	P5
JT121	N4
JT122*	G3
JT123*	E4
JT124*	K2
JT125	L11
JT126	M11
JT128*	K3
JT129*	L3
JT130*	L3
JT132*	K5
JT134*	M3
JT135	M11
JT136*	G3
JT137	N7
JT138	R7
JT139	R5
JT140	M5
JT141	L4
JT142	L4
JT143	L3
JT144	L3
JT145	L3
JT148*	K0
JT149	G9
JT151	G8
JT152	E8
JT153	P5
JT154	H9
JT155	K9
JT158	N8
JT159	E9
JT160	J8
JT161*	K2

JT163	G9
JT164	H9
JT165	J8
JT166	H9
JT167	G9
JT168	H9
JT169	H9
JT171*	E5
JT174*	K2
JT175*	K3
JT176*	E4
JT177*	K4
JT179*	H5
JT183	G8
JT184	G7
JT186	H9
JT187	J8
JT188	H8
JT189	G12
JT190*	A2
JT191*	B1
JT192*	A1
JT193*	B1
JT194*	C1
JT201	Q8
JT202	Q7
JT203*	B7
JT206*	C4
JT207	P9
JT208	Q9
JT209*	G9
JT210	P7
JT211	R6
JT212*	K4
JT213*	K4
JT214*	K4
JT215*	J4
JT217*	G8
JV001*	L9
JV002	C6
JV003	C2
JV004	C2
JV005	C3
JV006	C3
JV007	C3
JV008	C3
JV009	C3
JV010	C3
JV011	G1
JV012	C4
JV013	D1
JV014	D1
JV015	D1
JV016	D1
JV017	D4
JV018	D4
JV019	D4
JV020	G1
JV021	F1
JV022	J4
JV024	E4
JV025	G4
JV026	G4
JV027	F3
JV028	D7
JV029	D6
JV030	D6
JV031	E6
JV032	F6
JV034	G6
JV035	C1
JV036	C1
JV037*	Q10
JV038	H7
JV039	E9
JV040	D1
JV041	C1
JV042	B1
JV043*	M8
JV044	H3
JV045	H3

JV046	J4
JV047	F2
JV048	G2
JV049	G2
JV051	F1
JV052	F6
JV053	H2
JV054	H7
JV055	H0
JV056*	Q11
JV057	J4
JV058*	Q10
JV060*	H9
JV061*	Q9
JV062*	N3
JV065*	P8
JV066*	K10
JV068*	Q10
JV069*	P8
JV070*	N6
JV071*	N6
JV074*	N4
JV075*	N4
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JV080	J1
JV083	K1
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JV086	F1
JV087	D1
JV089*	N3
JV090*	N5
JV094*	J8
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JV096	E8
JV097	F7
JV098	D5
JV099	F8
JV100	C4
JV101*	K9
JV102	J3
JV103	J3
JV104	G11
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JV108	F7
JV109	E11
JV110	F9
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JV112	F9
JV113	F8
JV114	E7
JV115	G11
JV117*	R10
JV118	E8
JV120	D8
JV122	E7
JV123*	P5
JV126*	K1
JV129*	P7
JV130*	P8
JV131*	K9
JV139	F7
JV140*	M8
JV141	H1
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JV151	F8
JV152	E7
JV153	J3
JV154	G6
JV155*	M2
JV156*	M2
JV158*	P10
JV159*	L9
JV160	G7
JV161	H7
JV162*	H7
JV163	J5
JV165	F6
JV215	H2
JW001	R8

JW002	S9
JW003	J1
JW004	S8
JW005	R7
JW006	R3
JW007	S4
JW008	S5
JW009*	H9
JW010	R9
JW011	R3
JW012	P0
JW013	P0
JW014*	H10
JW015*	B3
JW016	Q9
JW017	R2
JW018	N1
JW019*	D12
JW020	K0
JW025	R1
JW026*	F12
JW027*	A3
JW032	L1
JW034	S3
JW035	R2
JW036	N1
JW040	P1
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JY008*	J5
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JZ011	C8
JZ012	C8
JZ014*	R10
JZ015*	R5
JZ016	C6
JZ017*	R8
JZ018	A10
JZ019*	R5
JZ020*	P11
JZ021	C9
JZ022*	S8
JZ023*	H4
JZ024*	K3
JZ025*	K3
JZ030*	P11
JZ040*	R5
JZ041*	R9
JZ042*	S9
JZ045*	S7
JZ046	C9
JZ048	B5
JZ049	B6
JZ051	F1
JZ052	C1
JZ053*	Q11
JZ061	B10
JZ062*	Q2
JZ070	B7
JZ071	C9
JZ072*	P3
JZ073*	Q2

LN430	P2
LN430*	D9
LN640	E11
LN641	Q1
LS030	L2

LS030*	G11
LT001	L11
LT002	Q6
LT004	M9
LV008	F4
LV023*	P3
LV033	E2
LV050	G2
LV052	E1
LV053	E1
LV063	D4
LV078	E6
LV082	E5
LV107	D6
LV123	F12
LV151	E11
LV153	F10
LV155	E10
LV162	F5
LV200	H1
LV214	J2
LV216	J2
LV226	H3
LV243	G3
LV245	G3
LV246	G2
LV247	G3
LV248	G1
LV251	F2
LZ001	A1
LZ002	A1
LZ030	A2
LZ031	A2
LZ050	A9
LZ051	A8
LZ055	A7

PS034	K1
PT001	Q10
PV251	F2

QS101	B11
QS102	B11
QS103	B12
QS104	B11
QT001	N11
QT002	Q10
QT003	Q11
QV028	E3
QV032	D2

RG030*	J4
RG031*	J5
RG032*	M4
RG033*	M4
RG034*	M4
RG035*	M3
RG036*	L3
RG037*	Q11
RG038*	R11
RG101	J1
RG102	J1
RG105*	R7
RG106*	Q7
RG107*	Q5
RG108*	Q5
RG109*	E11
RG111*	J11
RG112*	F11
RN431*	D10
RN436	N1
RN437*	E11
RN439*	D10
RN440*	D10
RN441	N2
RN640*	B12
RN641*	C11

RN642*	C11
RN643*	B11
RN644*	B11
RN645*	B12
RN646*	B12
RS030*	F10
RS031*	F10
RS035*	H10
RS036*	F11
RS039*	F10
RS040*	F10
RS042*	G10
RS043*	G10
RS044*	H11
RS045	M1
RS050	L2
RS051*	H10
RS101*	Q1
RS102*	R1
RS103*	R1
RS104*	R1
RS105*	Q1
RS106*	R1
RS112*	R2
RS113*	P1
RS114*	P2
RS115*	P1
RS116*	P1
RS119*	R1
RS120*	S3
RS121*	R1
RS122*	Q1
RS127*	Q1
RS128*	Q1
RS130*	Q4
RS901*	R1
RS904*	S2
RS905*	Q2
RS982*	Q1
RS983*	Q1
RT001*	G8
RT002	N4
RT002*	L3
RT003*	E7
RT004	N5
RT005*	E6
RT006*	E6
RT007*	G8
RT008*	H8
RT009*	H8
RT010*	G9
RT011*	G9
RT012*	M0
RT013*	E1
RT014	K6
RT015*	H7
RT016	P8
RT017*	F3
RT018*	F3
RT019*	F9
RT020*	F8
RT021*	G9
RT022*	G8
RT023*	F9
RT024*	F9
RT025*	F10
RT026*	G8
RT027	K8
RT030*	H4
RT031*	J3
RT032*	L2
RT033*	K3
RT034*	C4
RT035*	C5
RT036*	D8
RT037*	D8
RT038*	D7
RT039*	D8
RT040	N8
RT041*	D5
RT042*	D4
RT043*	D5
RT044*	D5
RT045*	D5
RT046*	C4
RT047*	C4
RT048*	C4
RT049*	C3

RT050*	H4
RT051*	H4
RT052*	B4
RT053	P11
RT055	S5
RT058*	E11
RT059*	E11
RT063*	L2
RT064*	L2
RT065*	K3
RT067*	G1
RT068*	F1
RT069*	D1
RT071*	B4
RT072*	B6
RT073*	B6
RT074*	B6
RT075*	C5
RT081*	C5
RT082*	L3
RT083*	G0
RT084*	C1
RT085*	C1
RT086*	G0
RT088*	B7
RT089	Q5
RT090	R9
RT091*	D5
RV001*	L9
RV002*	M9
RV003*	L8
RV004*	K8
RV005*	M8
RV006*	M8
RV007*	M8
RV008*	L8
RV010*	M6
RV011*	M8
RV020*	H8
RV021*	P9
RV022*	P9
RV023*	N9
RV024*	N5
RV025*	P9
RV026	C5
RV027*	P9
RV028*	N10
RV029*	P10
RV030*	P10
RV032*	P10
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RV041*	N10
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RV045*	M9
RV046*	M9
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RV055*	N12
RV056*	N11
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RV072*	N8
RV073*	P6
RV074*	N6
RV075*	P6
RV076*	N7
RV077*	N7
RV104*	P9
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RV106*	P6
RV109*	P6
RV110*	P6
RV111*	L4
RV112*	P6
RV120*	M1
RV121*	L1
RV122*	L1
RV123*	K1
RV124*	K1
RV125*	K2

RV126*	P6
RV127*	P5
RV128*	K1
RV129*	K2
RV130*	L2
RV131*	K1
RV135	G11
RV137*	N2
RV138*	M2
RV139*	M3
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RV141*	N2
RV142*	M2
RV143*	M2
RV144	G10
RV145*	M3
RV146*	N2
RV147*	M2
RV148*	M3
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RV154*	N1
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RV165*	L4
RV166*	M7
RV167*	M7
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RV243*	L9
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RV250*	L10
RV251*	L10
RV252*	M11
RV253*	M10
RV254*	M10
RV255*	M11
RV256*	M11
RV257*	M10
RV285*	K10
RW001*	D9
RW002*	C9
RW005*	A4
RW006	S10
RW008	R2
RW009	R2
RW012	P1
RW017*	A5
RW019*	C10
RW020*	B10

RW021	M0
RW024*	B9
RW025*	B9
RW029	Q3
RW030	Q1
RW031	Q0
RW032*	B4
RW033*	C9
RY001*	L4
RY002*	L4
RY003*	L4
RY004*	L4
RY006*	L4
RY007*	L4
RY009*	L4
RY010*	L5
RY011*	M5
RZ002*	P11
RZ003*	P11
RZ005*	R4
RZ007*	H4
RZ008*	H4
RZ010*	R3
RZ015	A4
RZ019*	R5
RZ020*	S6
RZ030*	R10
RZ031*	R10
RZ033*	S10
RZ034*	R10
RZ035*	R10
RZ036*	R10
RZ037*	S11
RZ050*	S3
RZ051*	S3
RZ052*	S5
RZ053*	S5
RZ054*	R3
RZ055*	S10
RZ056*	S5
RZ057*	S6
RZ059*	R4
RZ060*	R11
RZ065	G1
RZ066	G1

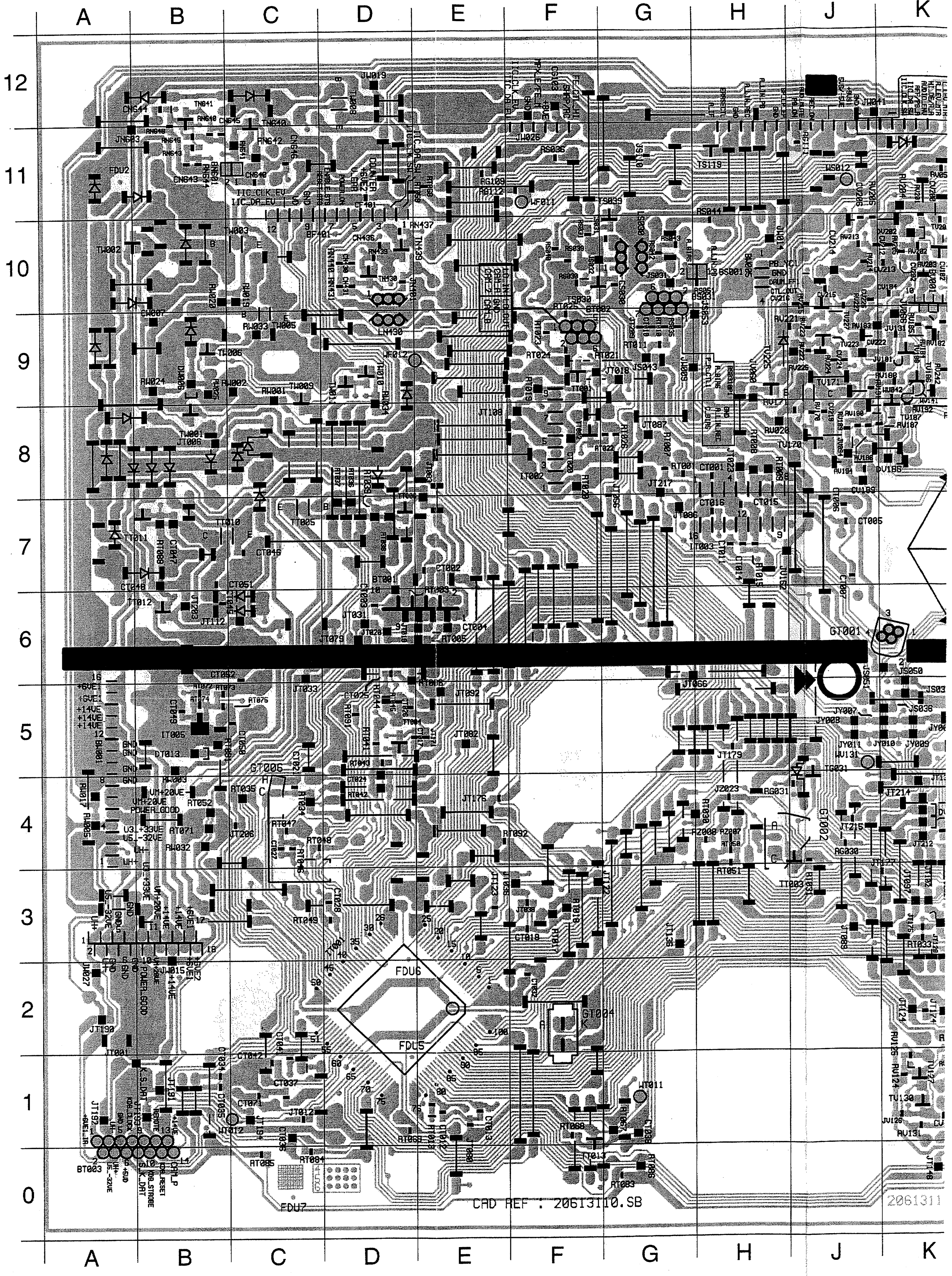
ST001	E12
ST001*	N0

GT001	J6
GT001*	J6
GT002	J9
GT002*	J4
GT003	H10
GT003*	L2
GT004*	F2
GT005	D7
GT005*	P4
GT006	Q8
GT006*	C5
TG029*	M5
TG030*	M4
TG031*	J5
TN438*	D10
TN439*	E10
TN640*	C12
TN641*	B12
TS030*	F10
TS039*	G11
TS101*	Q3
TS119*	H11
TT001*	F9
TT002*	F8
TT003*	J3
TT004*	D5
TT005	P5
TT005*	C7
TT006*	D8
TT010	Q5

TT010*	C7
TT011*	B7
TT012*	B7
TT013*	F1
TV002*	L8
TV003*	M8
TV006*	M8
TV011*	M8
TV024*	N5
TV028*	N10
TV030*	P10
TV036*	N11
TV047*	M10
TV055*	N11
TV103*	Q6
TV126*	P5
TV127*	K1
TV130*	K1
TV135*	M2
TV140*	M2
TV141*	N2
TV143*	M2
TV145*	M2
TV147*	M3
TV149*	N3
TV154*	N2
TV164*	M4
TV170*	J8
TV171	J3
TV171*	J9
TV186*	K9
TV187*	K8
TV188*	K9
TV200*	K11
TV201*	K11
TV223*	J9
TV225*	H9
TV227*	J10
TV243*	L9
TV248*	L10
TV250*	M11
TV251*	M10
TW001*	B8
TW002*	A10
TW003	Q1
TW003*	C10
TW005	Q2
TW005*	C9
TW006*	B9
TW008	P0
TW008*	D12
TW009*	C9
TZ001*	R4
TZ002*	Q3
TZ010*	R2
TZ019*	R4
TZ020*	R6
TZ031*	S9
TZ032*	R11
TZ050*	R3
TZ051*	S4
TZ055*	S5
TZ057*	R10

WS011	C10
WS011*	Q2
WS012	J1
WS012*	J11
WV011	G3
WV011*	K9
WV012	C3
WV012*	R9
WV021	D4
WV021*	P9
WV022	D3
WV022*	P9
WV031	C8
WV031*	Q4
WV032	F6
WV032*	M6

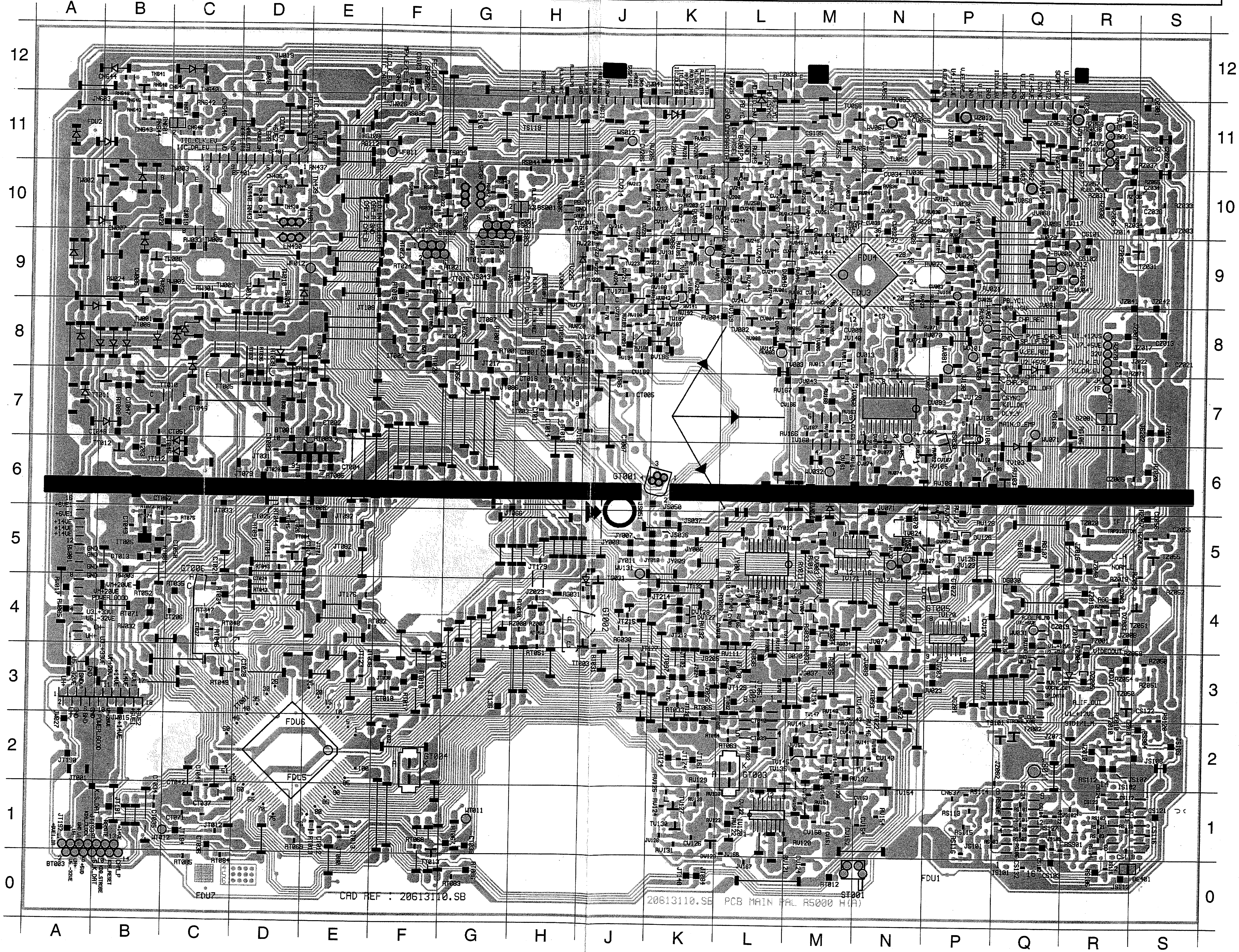
Main P.C.B. Solder side • Circuit imprimé de la platine principa
Piastra principale lato saldature • Platina p



10* C7
11* B7
12* B7
13* F1
02* L8
03* M8
06* M8
11* M8
24* N5
28* N10
30* P10
36* N11
47* M10
55* N11
03* Q6
26* P5
27* K1
30* K1
5* M2
0* M2
1* N2
3* M2
5* M2
7* M3
9* N3
4* N2
4* M4
0* J8
1 J3
1* J9
6* K9
7* K8
3* K9
0* K11
1* K11
3* J9
5* H9
7* J10
3* L9
3* L10
0* M11
1* M10
1* B8
2* A10
3 Q1
3* C10
5 Q2
5* C9
3* B9
3 P0
8* D12
9* C9
* R4
* Q3
* R2
* R4
* R6
* S9
* R11
* R3
* S4
* S5
* R10

C10
* Q2
* J1
* J11
G3
* K9
C3
* R9
D4
* P9
D3
* P9
C8
* Q4
F6
* M6

Main P.C.B. Solder side • Circuit imprimé de la platine principale côté cuivre • Hauptleiterplatte Lötseite Piastra principale lato saldature • Platina principal lado del cobre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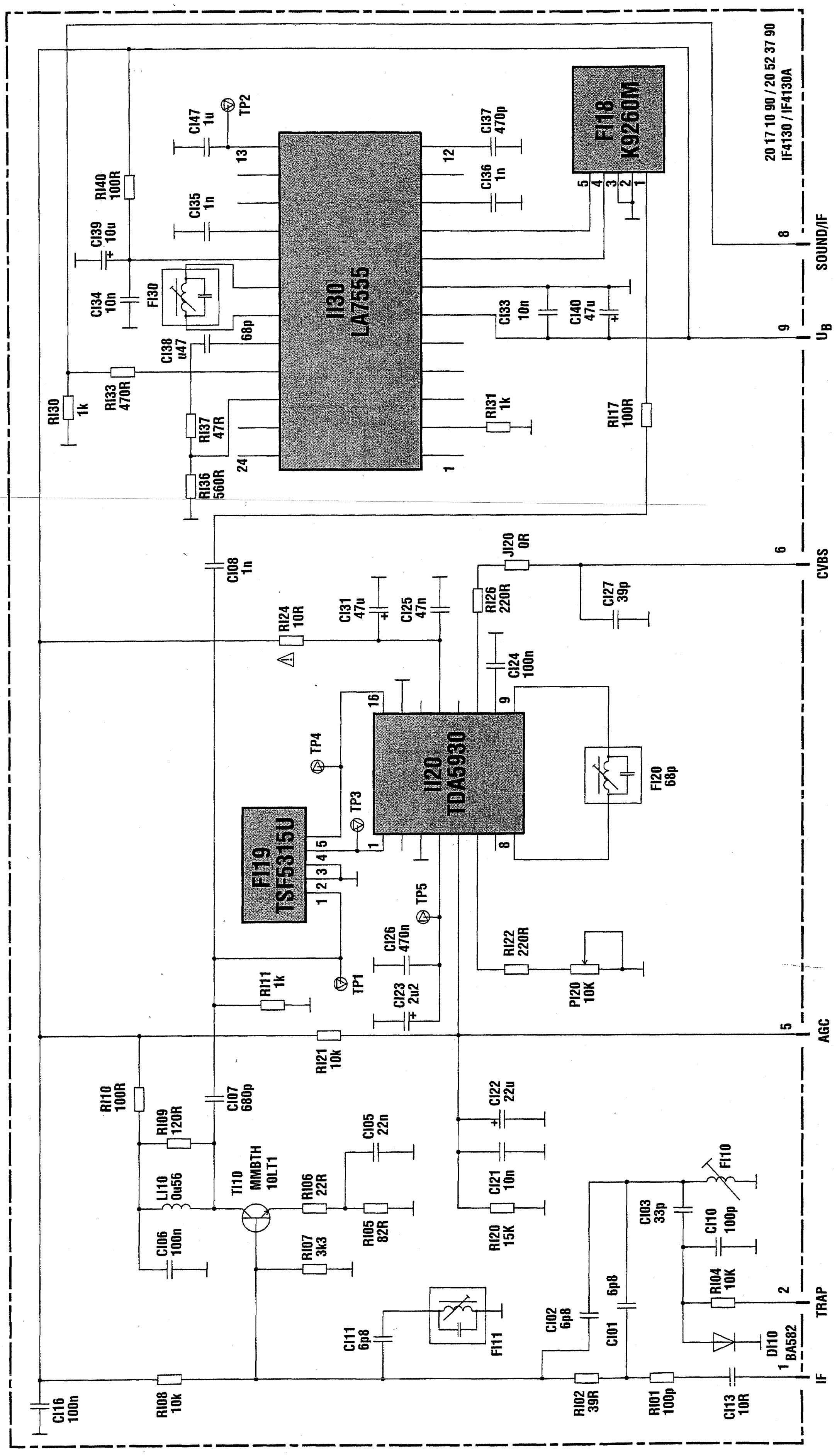
12 11 10 9 8 7 6 5 4 3 2 1 0
FDU1
FDU3
FDU4
FDU5
FDU6
FDU7
GT001
GT002
GT003
GT004
GT005
GT006
ST001
CAD REF : 20613110.SB
20613110.SB PCB MAIN PAL R5000 H(A)

IF 4130 / 4130 A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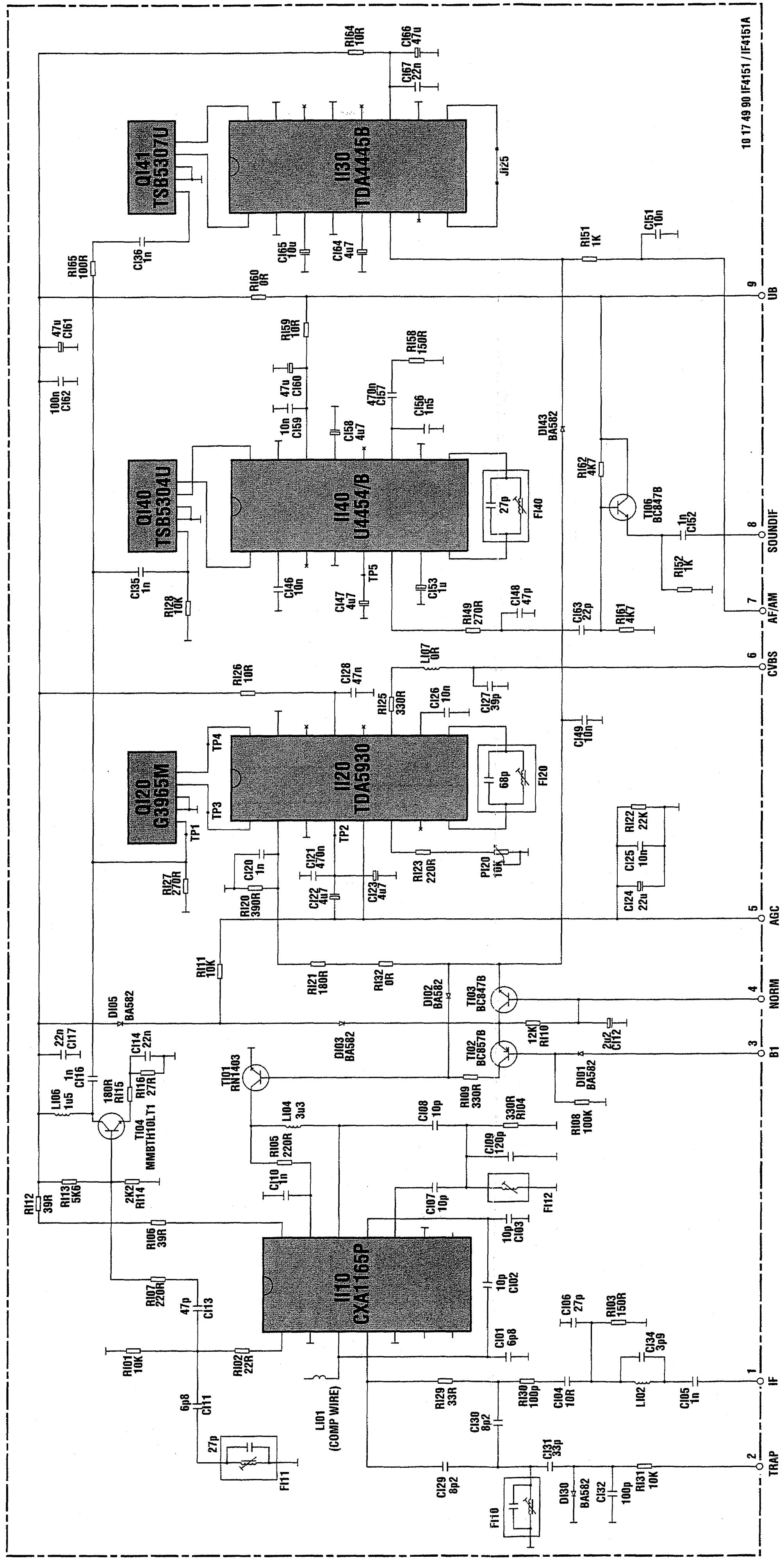
IF4130 / IF4130A
I130
LA7555
FI18
K9260M
I120
TDA5930
FI19
TSF5315U
FI20
68p
FI30
FI10
FI11
TI10
MMBTH
10LT1
TP1
TP2
TP3
TP4
TP5
PI20
10K
CI47 1u
CI37 470p
CI36 1n
CI35 1n
CI39 10u
RI40 100R
CI34 10n
CI38 u47
68p
RI30 1k
RI33 470R
RI37 47R
RI36 560R
CI33 10n
CI40 47u
RI31 1k
RI17 100R
CI08 1n
JI20 0R
CI27 39p
RI26 220R
CI31 47u
CI25 47n
RI24 10R
CI24 100n
CI26 470n
CI23 2u2
RI22 220R
RI11 1k
RI21 10k
RI10 100R
RI09 120R
CI07 680p
CI22 22u
CI05 22n
LI10 0u56
RI06 22R
RI05 82R
CI21 10n
RI20 15K
CI06 100n
RI07 3k3
CI03 33p
CI10 100p
RI04 10K
CI11 6p8
CI02 6p8
CI01 6p8
DI10 BA582
CI16 100n
RI08 10K
RI02 39R
RI01 100p
CI13 10R
8 SOUND/IF
9 UB
6 CVBS
5 AGC
2 TRAP
1 IF

IF 4151 / 4151 A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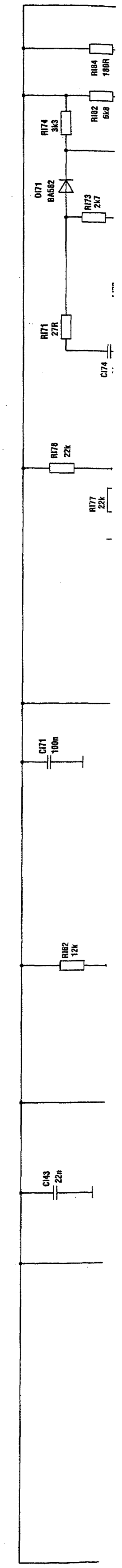
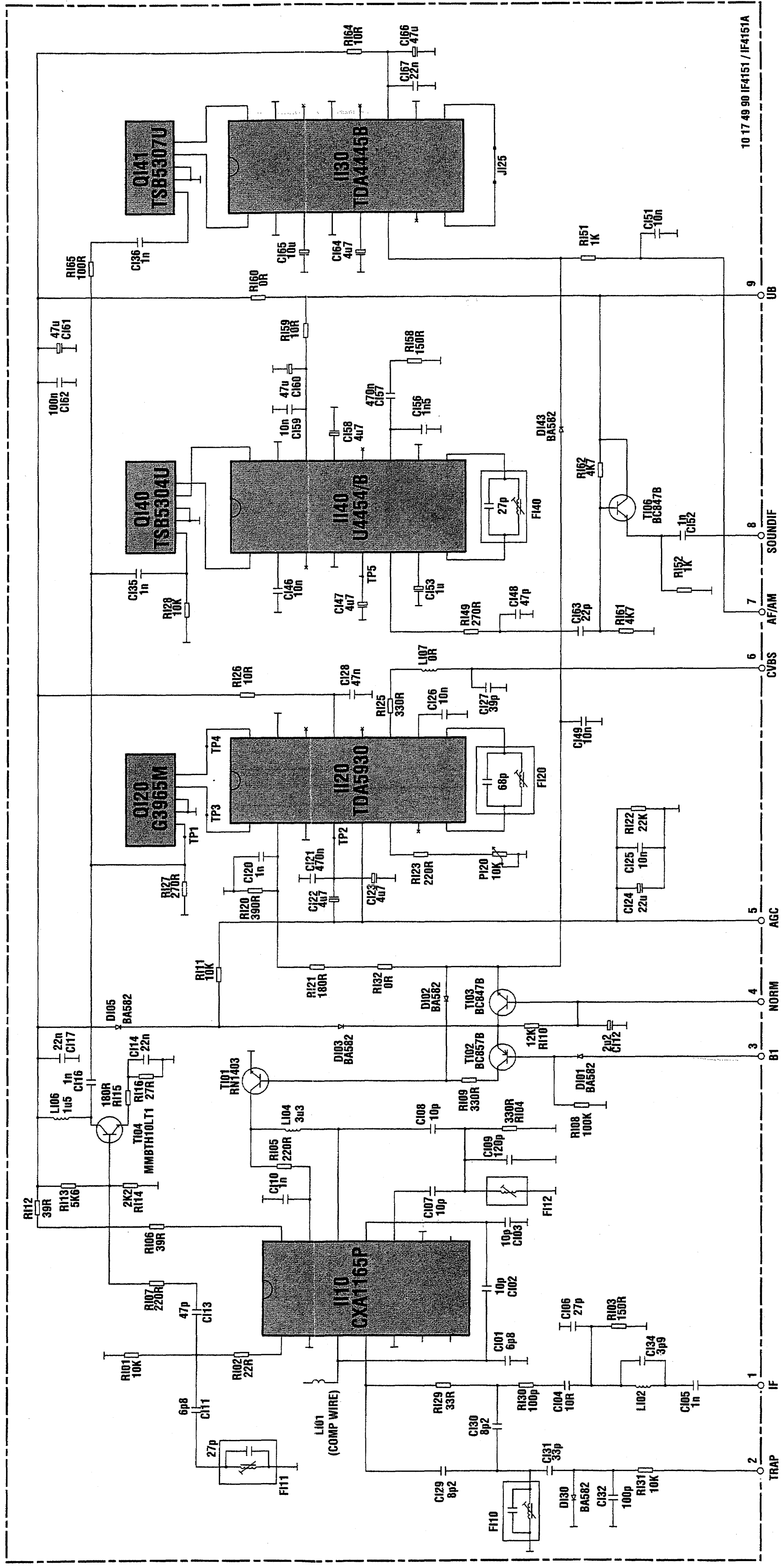
TSB5307U
I130
TDA4445B
Q140
TSB5304U
I140
U4454/B
Q120
G3965M
I120
TDA5930
I110
CXA1165P
FI40
FI20
FI12
FI11
FI10
JI25
TP1
TP2
TP3
TP4
TP5
TI06 BC847B
TI03 BC847B
TI02 BC857B
TI01 RN1403
TI04 MMBTH10LT1
DI43 BA582
DI05 BA582
DI02 BA582
DI03 BA582
DI01 BA582
DI30 BA582
LI01 (COMP WIRE)
LI02
LI04 3u3
LI06 1u5
LI07 0R
PI20 10K
RI64 10R
CI66 47u
CI67 22n
RI65 100R
CI36 1n
RI60 0R
CI65 10u
CI64 4u7
RI51 1K
CI51 10n
CI61 47u
CI62 100n
RI59 10R
CI60 47u
CI59 10n
CI58 4u7
CI57 470p
RI58 150R
CI56 1n5
RI62 4K7
CI52 1n
RI52 1K
CI35 1n
RI28 10K
CI46 10n
CI47 4u7
CI53 1u
RI49 270R
CI48 47p
CI63 22p
RI61 4K7
27p
RI26 10R
CI28 47n
RI25 330R
CI26 10n
CI27 39p
CI49 10n
68p
RI22 22K
CI25 10n
CI24 22u
RI27 270R
CI20 1n
CI21 470n
CI22 4u7
CI23 4u7
RI20 390R
RI23 220R
RI11 10K
RI21 180R
RI32 0R
12K RI10
2u2 CI12
CI17 22n
CI16 1n
CI14 22n
RI15 180R
RI16 27R
RI05 220R
CI10 1n
CI08 10p
RI09 330R
RI04 330R
RI08 100K
CI09 120p
CI07 10p
CI03 10p
CI02 10p
RI12 39R
RI13 5K6
RI14 2K2
RI06 39R
RI07 220R
CI13 47p
CI06 27p
RI03 150R
CI34 3p9
RI01 10K
RI02 22R
CI01 6p8
CI11 6p8
27p
RI29 33R
RI30 100p
CI04 10R
CI05 1n
CI30 8p2
CI29 8p2
CI31 33p
CI32 100p
RI31 10K
9 UB
8 SOUNDIF
7 AF/AM
6 CVBS
5 AGC
4 NORM
3 B1
1 IF
2 TRAP

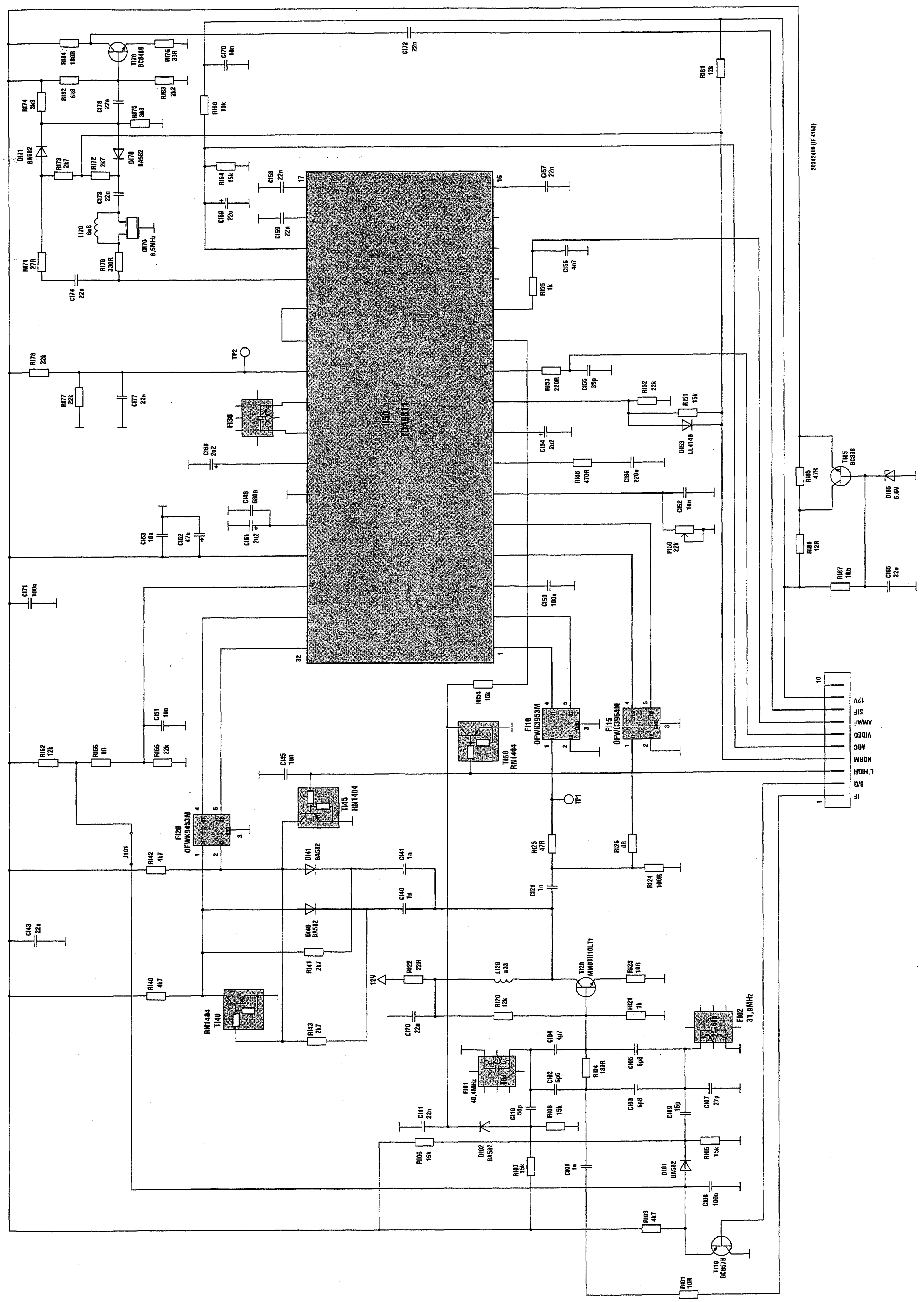
IF 415



IF 4151 / 4151 A

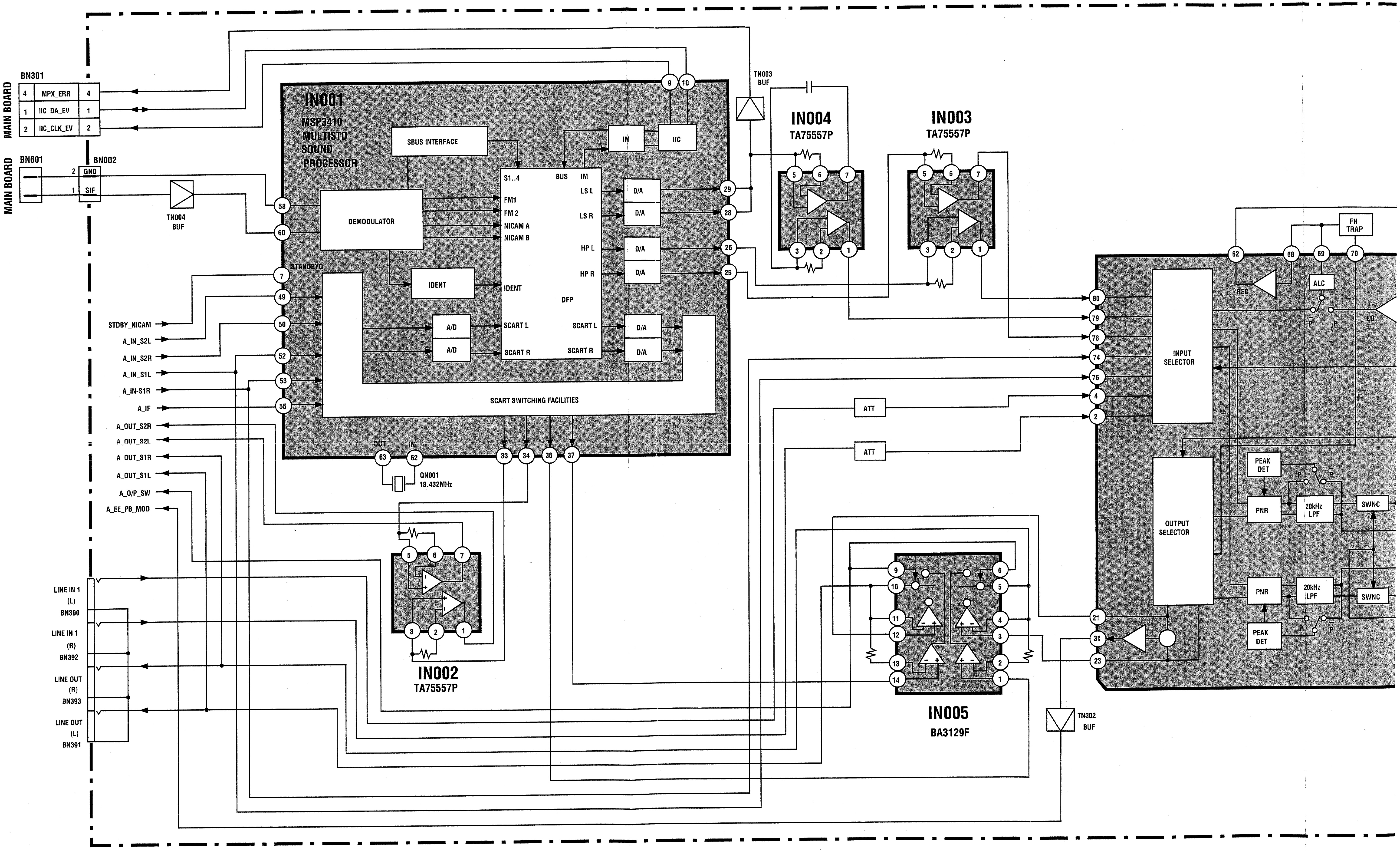

10 17 49 90 IF4151 / IF4151A
Q141 TSB5307U
I130 TDA4445B
J125
Q140 TSB5304U
I140 U4454/B
F140
Q120 G3965M
I120 TDA5930
F120
P120 10K
T106 BC847B
D143 BA582
T103 BC847B
T102 BC857B
T101 RN1403
T104 MMBTH10LT1
D105 BA582
D102 BA582
D103 BA582
D101 BA582
I110 CXA1165P
F112
F111
F110
D130 BA582
L101 (COMP WIRE)
L102
9 UB
8 SOUNDIF
7 AF/AM
6 CVBS
5 AGC
4 NORM
3 B1
1 IF
2 TRAP

IF 4152


I150 TDA9811
F130
F120 OFWK3453M
F110 OFWG3953M
F115 OFWG3954M
T150 RN1404
T145 RN1404
T140 RN1404
T120 MMBTH10LT1
T110 BC857B
T185 BC338
F101 40.4MHz
F102 31.9MHz
TP1
TP2
12V
SIF
AM/AF
VIDEO
AGC
NORM
L'/HIGH
B/G
IF

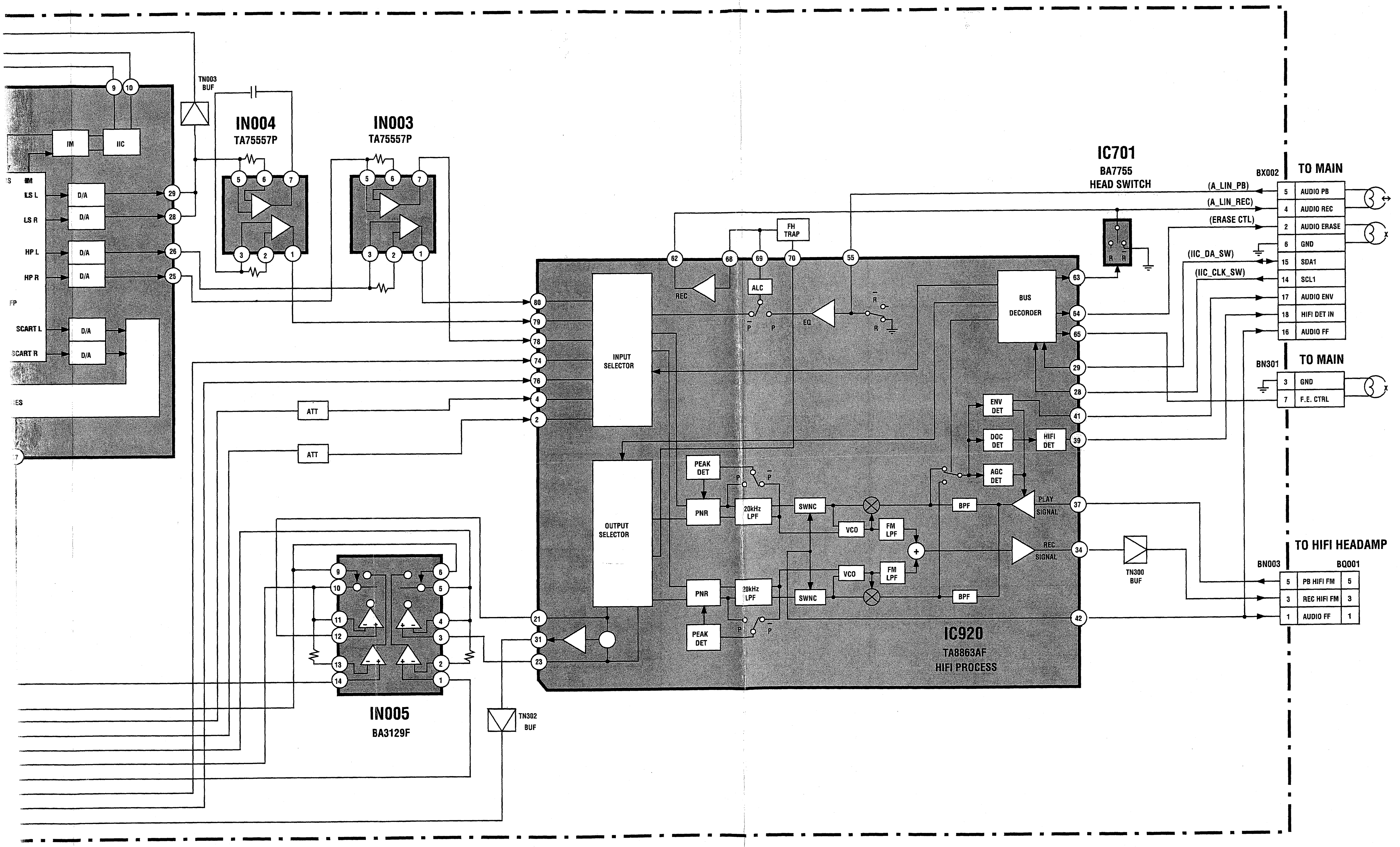
AUDIO HIFI / SCART CONNECTION BOARD - PLATINE AUDIO HIFI / PRISES SCART - LEITERPLATTE AUDIO HIFI / SCART - PIASTRA AUDIO HIFI / SCART - PLATINA A

BLOCK DIAGRAM - SCHEMA SYNOPTIQUE - BLOCKSCHALTBILD - SCHEMA A BLOCCHI - ESQUEMA DE BLOQUES


MAIN BOARD
BN301
4 MPX_ERR 4
1 IIC_DA_EV 1
2 IIC_CLK_EV 2
MAIN BOARD
BN601
BN002
2 GND
1 SIF
TN004 BUF
IN001
MSP3410
MULTISTD
SOUND
PROCESSOR
SBUS INTERFACE
IM
IIC
9
10
DEMODULATOR
S1..4
BUS
IM
FM1
FM 2
NICAM A
NICAM B
LS L
LS R
HP L
HP R
IDENT
IDENT
DFP
A/D
A/D
SCART L
SCART R
SCART L
SCART R
D/A
STANDBYQ
SCART SWITCHING FACILITIES
58
60
7
49
50
52
53
55
29
28
26
25
OUT
IN
63
62
33
34
36
37
QN001
18.432MHz
STDBY_NICAM
A_IN_S2L
A_IN_S2R
A_IN_S1L
A_IN-S1R
A_IF
A_OUT_S2R
A_OUT_S2L
A_OUT_S1R
A_OUT_S1L
A_O/P_SW
A_EE_PB_MOD
LINE IN 1
(L)
BN390
LINE IN 1
(R)
BN392
LINE OUT
(R)
BN393
LINE OUT
(L)
BN391
IN002
TA75557P
TN003
BUF
IN004
TA75557P
IN003
TA75557P
ATT
ATT
IN005
BA3129F
TN302
BUF
80
79
78
74
76
4
2
21
31
23
62
68
69
70
REC
ALC
FH
TRAP
P
P
EQ
INPUT
SELECTOR
OUTPUT
SELECTOR
PEAK
DET
PNR
20kHz
LPF
SWNC
PNR
20kHz
LPF
SWNC
PEAK
DET

/ PRISES SCART - LEITERPLATTE AUDIO HIFI / SCART - PIASTRA AUDIO HIFI / SCART - PLATINA AUDIO HIFI / SCART

BLOCCHI - ESQUEMA DE BLOQUES



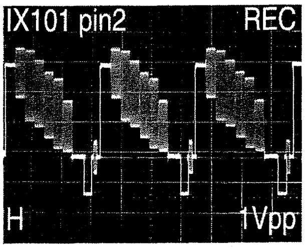
TN003
BUF
IM
IIC
LS L
LS R
HP L
HP R
FP
SCART L
SCART R
ES
D/A
IN004
TA75557P
IN003
TA75557P
IC701
BA7755
HEAD SWITCH
BX002
TO MAIN
(A_LIN_PB)
(A_LIN_REC)
(ERASE CTL)
(IIC_DA_SW)
(IIC_CLK_SW)
AUDIO PB
AUDIO REC
AUDIO ERASE
GND
SDA1
SCL1
AUDIO ENV
HIFI DET IN
AUDIO FF
BN301
TO MAIN
GND
F.E. CTRL
FH
TRAP
REC
ALC
EQ
BUS
DECORDER
INPUT
SELECTOR
OUTPUT
SELECTOR
ATT
ENV
DET
DOC
DET
HIFI
DET
AGC
DET
PEAK
DET
PNR
20kHz
LPF
SWNC
VCO
FM
LPF
BPF
PLAY
SIGNAL
REC
SIGNAL
TN300
BUF
TO HIFI HEADAMP
BN003
BQ001
PB HIFI FM
REC HIFI FM
AUDIO FF
IC920
TA8863AF
HIFI PROCESS
IN005
BA3129F
TN302
BUF

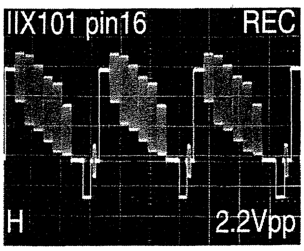
MEASUREMENTS AUDIO HIFI / SCART CONNECTION - MESURES AUDIO HIFI / PRISES SCART - MESSUNGEN LEITERPLATTE AUDIO HIFI / SCART - MISURI AUDIO HIFI / SCART - MEDIDAS AUDIO HIFI / SCART

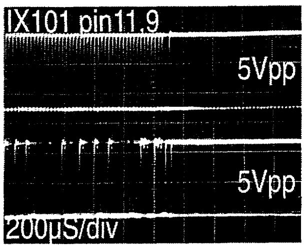
TMB		MODE		
LOC	PIN	EE	PLAY	REC.
IN001	1	0	0	0
	2	3.8	3.6	3.8
	3	3.8	3.6	3.8
	4	0	0	0
	5	5	5	5
	6	0	0	0
	7	5.8	5.8	5.8
	8	0	0	0
	9	4.6	4.6	4.6
	10	4.2	4.2	4.2
	11	2.5	2.5	2.5
	12	2.5	2.5	2.5
	13	4	4	4
	14	2.4	2.4	2.4
	15	2.4	2.4	2.4
	16	2.4	2.4	2.4
	17	1.6	1.6	1.6
	18	5	5	5
	19	0	0	0
	20	1.6	1.6	1.6
	21	-	-	-
	22	2.5	2.5	2.5
	23	-	-	-
	24	5	5	5
	25	2	2	2
	26	2	2	2
	27	0	0	0
	28	2	2	2
	29	1.9	1.9	1.9
	30	0	0	0
	31	3.8	3.8	3.8
	32	3.8	3.8	3.8
	33	3.8	3.8	3.8
	34	3.8	3.8	3.8
	35	0	0	0
	36	3.8	3.8	3.8
	37	3.8	3.8	3.8
	38	6.4	6.4	6.4
	39	8.3	8.3	8.3
	40	6.4	6.4	6.4
	41	0	0	0
	42	3.8	3.8	3.8
	43	3.8	3.8	3.8
	44	3.8	3.8	3.8
	45	3.8	3.8	3.8
	46	3.8	3.8	3.8
	47	3.8	3.8	3.8
	48	0	0	0
	49	3.8	3.8	3.8
	50	3.8	3.8	3.8
	51	0	0	0
	52	3.8	3.8	3.8
	53	3.8	3.8	3.8
	54	2.6	2.6	2.6
	55	3.8	3.8	3.8
	56	0	0	0
	57	5	5	5
	58	0	0	0
	59	1.5	1.5	1.5
	60	1.5	1.5	1.5
	61	0	0	0
	62	2.6	2.6	2.6
	63	2.6	2.6	2.6
	64	0	0	0
IN002	1	6.3	6.3	6.3
	2	6.3	6.3	6.3
	3	6.1	6.1	6.1
	4	0	0	0
	5	6.1	6.1	6.1
	6	6.3	6.3	6.3
	7	6.3	6.3	6.3
	8	12.6	12.6	12.6
IN003	1	4.4	4.4	4.4
	2	4.4	4.4	4.4
	3	4.2	4.2	4.2
	4	0	0	0
	5	4.2	4.2	4.2
	6	4.4	4.4	4.4
	7	4.4	4.4	4.4
	8	8.7	8.7	8.7
IN004	1	4.4	4.4	4.4
	2	4.4	4.4	4.4
	3	4.3	4.3	4.3
	4	0	0	0
	5	4.1	4.1	4.1
	6	4.4	4.4	4.4
	7	4.4	4.4	4.4
	8	8.7	8.7	8.7
IN005	1	6.7	6.7	6.7
	2	6.7	6.7	6.7
	3	6.7	6.7	6.7
	4	6.9	6.9	6.9
	5	6.9	6.9	6.9
	6	7.2	7.2	7.2
	7	0	0	0
	8	12.5	12.5	12.5
	9	7.2	7.2	7.2
	10	6.9	6.9	6.9
	11	6.9	6.9	6.9
	12	6.7	6.7	6.7
	13	6.9	6.9	6.9
	14	6.7	6.7	6.7

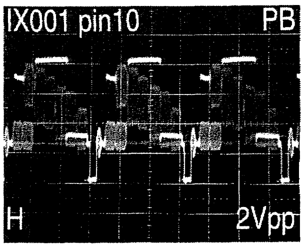
MEASUREMENTS AUDIO HIFI / SCART CONNECTION - MESURES AUDIO HIFI / PRISES SCART - MESSUNGEN LEITERPLATTE AUDIO HIFI / SCART - MISURI AUDIO HIFI / SCART - MEDIDAS AUDIO HIFI /SCART

TMB		MODE		
LOC	PIN	EE	PLAY	REC.
IN006	1	8.5	8.5	8.5
	2	0	0	0
	3	0	0	0
	4	0	0	0
	5	5.3	5.3	5.3
IX101	1	0	0	0
	2	1.2	1.2	1.2
	3	5.8	5.8	5.8
	4	1.6	1.6	1.6
	5	5.8	5.8	5.8
	6	1.8	1.8	1.8
	7	3.7	3.7	3.7
	8	1.4	1.4	1.4
	9	0	0	0
	10	2.4	2.4	2.4
	11	0	0	0
	12	1.4	1.4	1.4
	13	0	0	0
	14	0	0	0
	15	1.3	1.3	1.3
	16	1.8	1.8	1.8
	17	0	0	0
	18	5.8	5.8	5.8
	19	5.8	5.8	5.8
	20	5.8	5.8	5.8
TN001	E	0	0	0
	B	3.7	3.7	3.7
	C	0	0	0
TN002	E	0	0	0
	B	0	0	0
	C	5	5	5
TN003	E	0	0	0
	B	0.6	0.6	0.6
	C	0	0	0
TN004	E	4.1	4.1	4.1
	B	4.7	4.7	4.7
	C	8.4	8.4	8.4
TN300	E	0.6	0.6	1.2
	B	0	0	0.6
	C	0	0	0
TN302	E	4.9	4.9	4.9
	B	4.3	4.3	4.3
	C	0	0	0



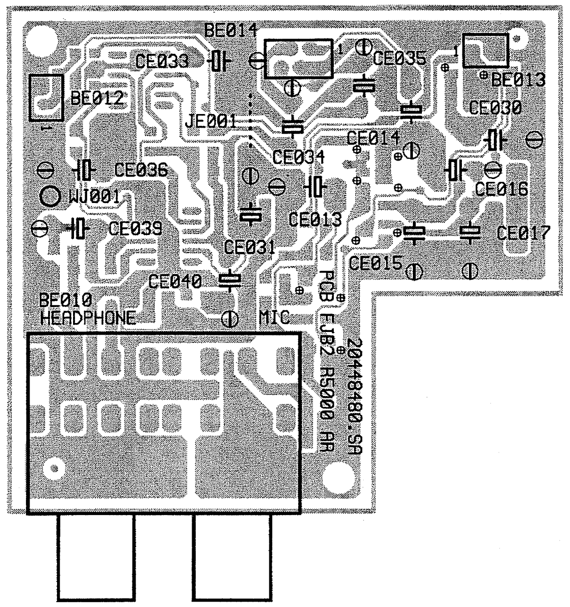


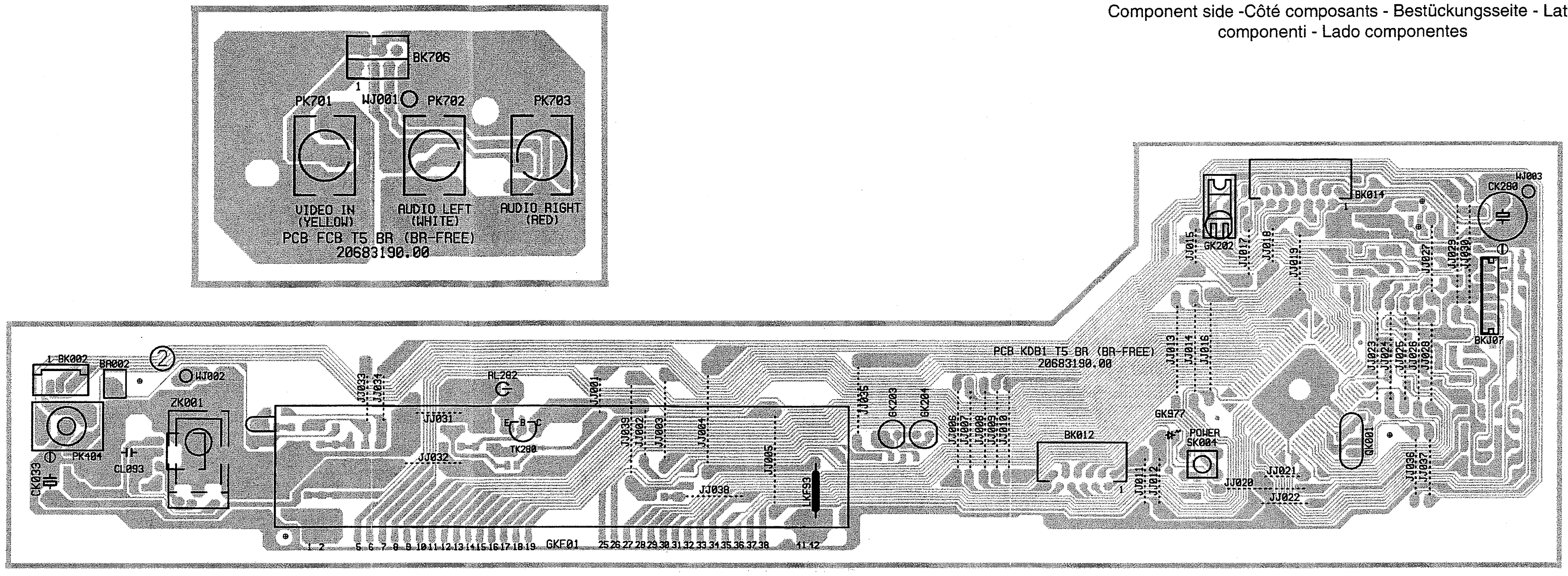


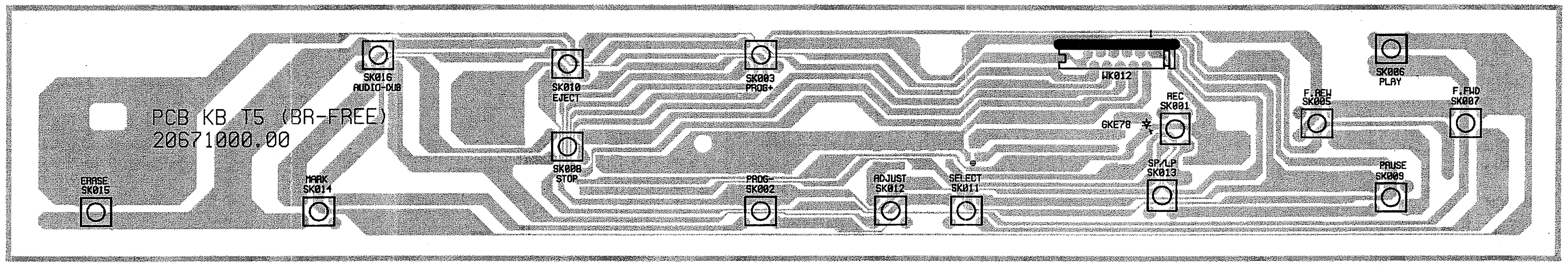


KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR **(THOMSON : VPH 6780 - VPH 6790)**

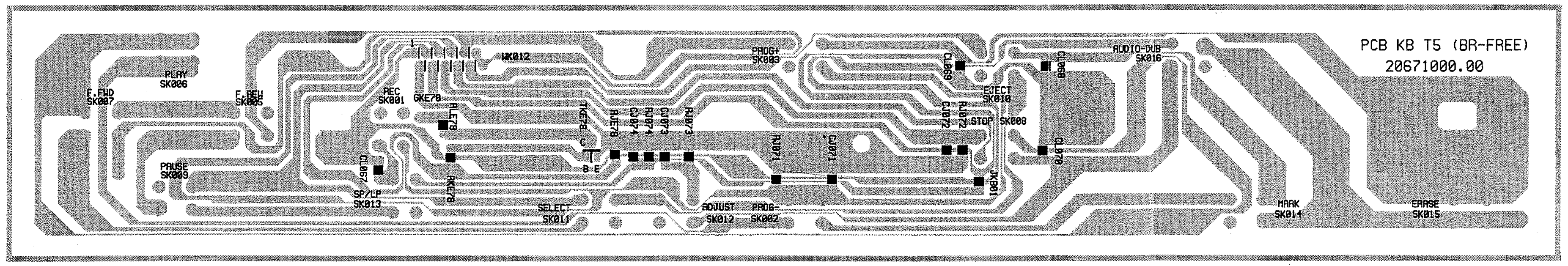
Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

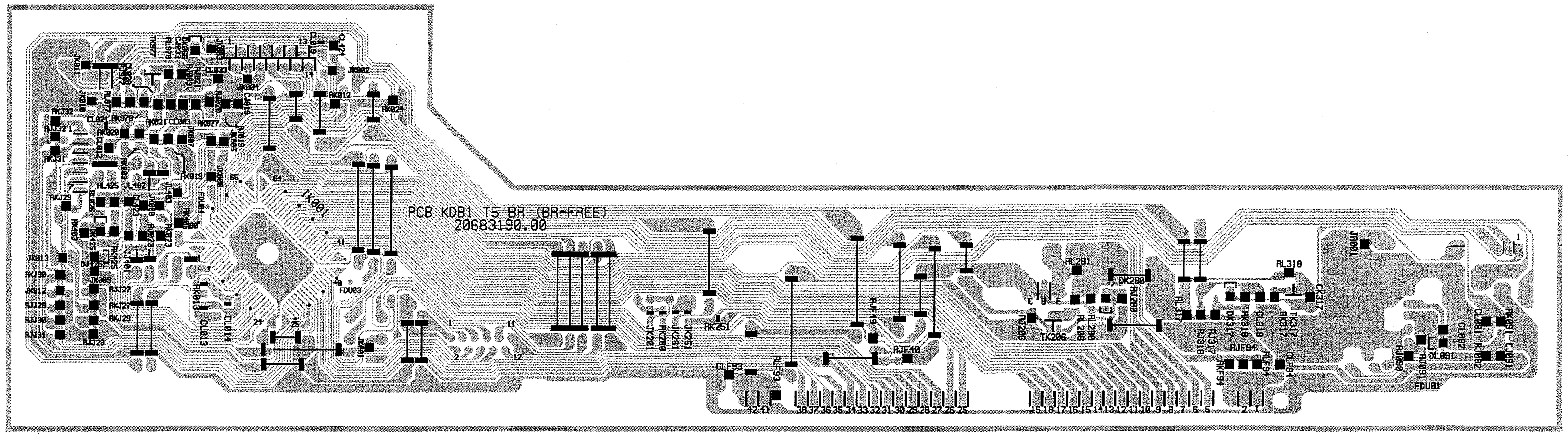

BE014
CE033
CE035
BE013
BE012
CE030
JE001
CE034
CE014
CE036
WJ001
CE016
CE039
CE013
CE017
CE031
CE015
CE040
BE010
HEADPHONE
MIC
PCB FJB2 A5000 AA
20448480.SA

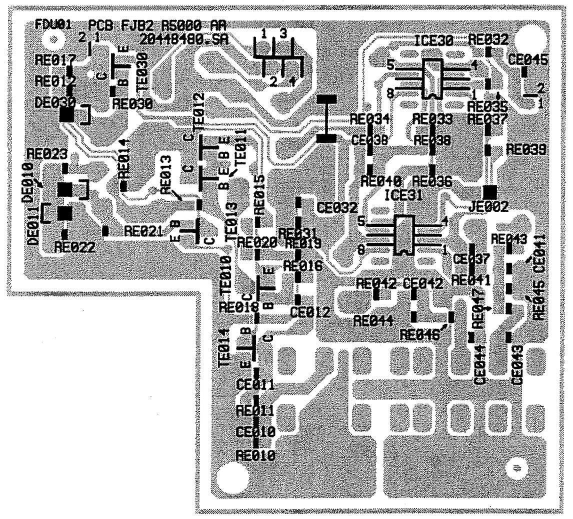

BK706
PK701
WJ001
PK702
PK703
VIDEO IN (YELLOW)
AUDIO LEFT (WHITE)
AUDIO RIGHT (RED)
PCB FCB T5 BR (BR-FREE)
20683190.00
PCB KDB1 T5 BR (BR-FREE)
20683190.00
BK002
BA002
WJ002
ZK001
PK104
CL093
JJ031
JJ032
JJ038
TK200
RL202
BK012
GK977
POWER SK004
BK014
CK200
WJ003
BK107
JJ020
JJ021
JJ022
GKF01

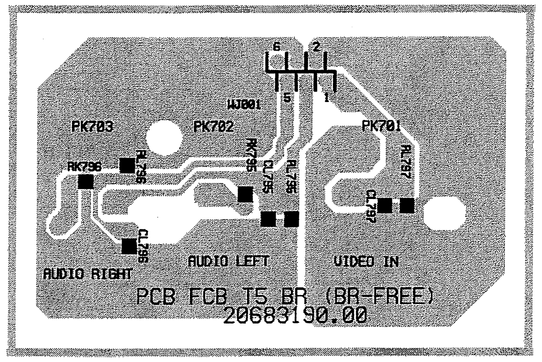

PCB KB T5 (BR-FREE)
20671000.00
SK016 AUDIO-DUB
SK010 EJECT
SK003 PROG+
WK012
REC SK001
GKE78
F.REW SK005
PLAY SK006
F.FWD SK007
SK008 STOP
ERASE SK015
MARK SK014
PROG- SK002
ADJUST SK012
SELECT SK011
SP/LP SK013
PAUSE SK009

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre


PCB KB T5 (BR-FREE)
20671000.00
WK012
PROG+ SK003
AUDIO-DUB SK016
PLAY SK006
F.FWD SK007
F.REW SK005
REC SK001
GKE78
EJECT SK010
STOP SK008
PAUSE SK009
SP/LP SK013
SELECT SK011
ADJUST SK012
PROG- SK002
MARK SK014
ERASE SK015


PCB KDB1 T5 BR (BR-FREE)
20683190.00
IK001
FDU01
TK206
RL281
RL318


FDU01
PCB FJB2 A5000 AA
20448480.SA
ICE30
ICE31
RE032
CE045
TE012
TE011
TE013
TE010
TE014
JE002
CE032
CE042
CE012
CE011
CE010


WJ001
PK703
PK702
PK701
AUDIO RIGHT
AUDIO LEFT
VIDEO IN
PCB FCB T5 BR (BR-FREE)
20683190.00

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENTEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR (THOMSON: VPH 6780 - VPH 6790)

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

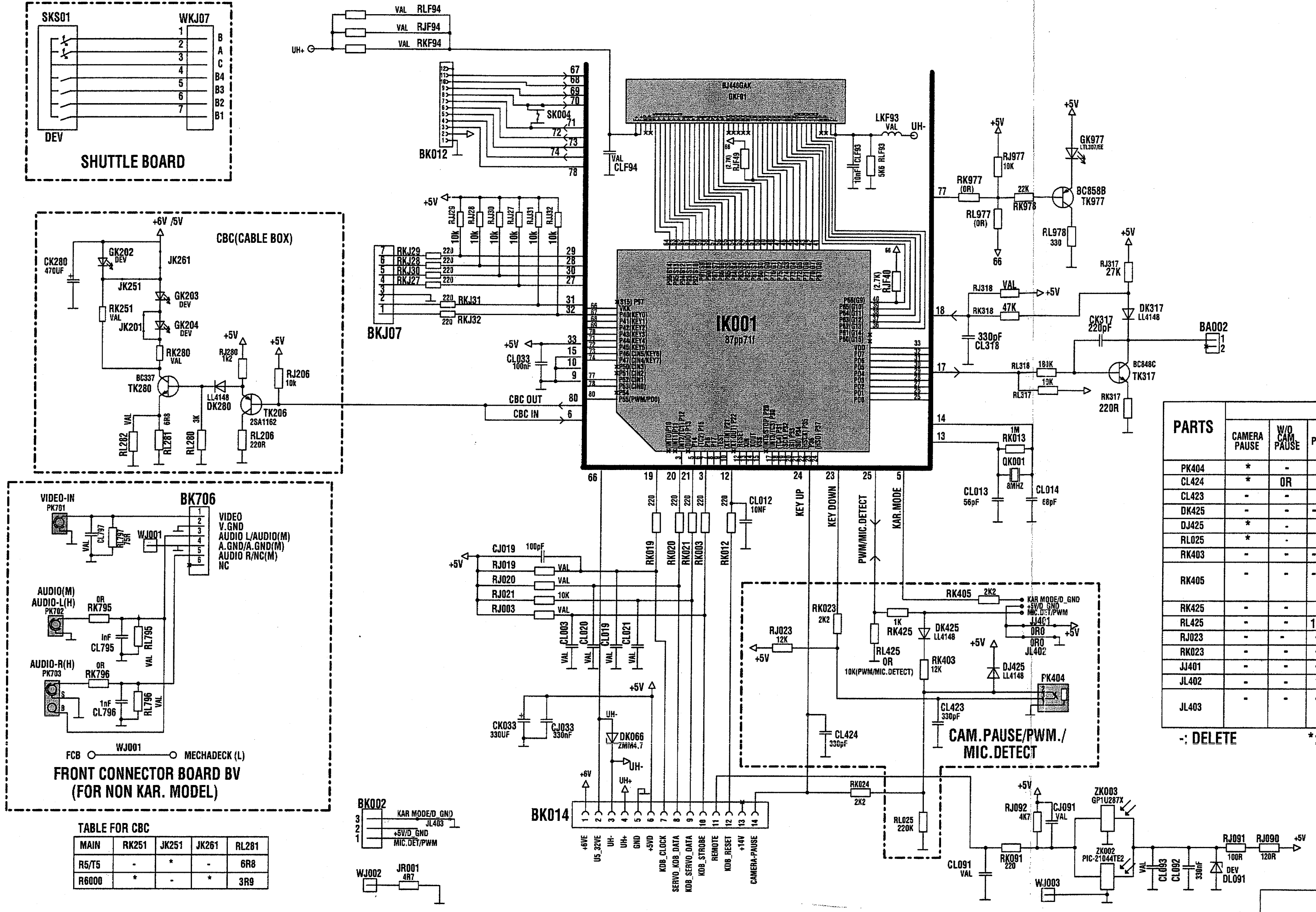

SKS01
WKJ07
DEV
SHUTTLE BOARD
CBC(CABLE BOX)
CK280
GK202
JK261
JK251
GK203
RK251
JK201
GK204
RK280
TK280
TK206
DK280
RL206
RJ206
RL282
RL281
RL280
VIDEO-IN
BK706
VIDEO
V.GND
AUDIO L/AUDIO(M)
A.GND/A.GND(M)
AUDIO R/NC(M)
NC
AUDIO(M)
AUDIO-L(H)
RK795
CL795
RL795
AUDIO-R(H)
RK796
CL796
RL796
FCB
WJ001
MECHADECK (L)
FRONT CONNECTOR BOARD BV
(FOR NON KAR. MODEL)
RLF94
RJF94
RKF94
UH+
BK012
SK004
CLF94
BKJ07
RKJ29
RKJ28
RKJ30
RKJ27
RKJ31
RKJ32
CL033
CBC OUT
CBC IN
IK001
LKF93
UH-
RK977
RL977
RJ977
RK978
RL978
GK977
TK977
BC858B
RJ318
RK318
CL318
RL318
RL317
RJ317
DK317
CK317
TK317
BC848C
RK317
BA002
RK013
QK001
CL013
CL014
CL012
RK019
RK020
RK021
RK003
RK012
KEY UP
KEY DOWN
PWM/MIC.DETECT
KAR.MODE
CJ019
RJ019
RJ020
RJ021
RJ003
CL002
CL020
CL019
CL021
CK033
CJ033
DK066
RK023
RJ023
RK405
RK425
DK425
RL425
RK403
DJ425
JJ401
JL402
FK404
CL423
CL424
CAM.PAUSE/PWM./MIC.DETECT
BK002
JL403
KAR MODE/D_GND
MIC.DET/PWM
WJ002
JR001
BK014
RK024
RL025
CL091
RK091
RJ092
CJ091
ZK003
ZK002
CL092
CL093
RJ091
RJ090
DL091
WJ003

TABLE FOR CBC

MAIN	RK251	JK251	JK261	RL281
R5/T5	-	*	-	6R8
R6000	*	-	*	3R9

<table>
<tr><th rowspan="3">PARTS</th><th colspan="6">OPTION</th></tr>
<tr><th rowspan="2">CAMERA PAUSE</th><th rowspan="2">W/O CAM. PAUSE</th><th rowspan="2">PWM</th><th rowspan="2">MIC.DETECT</th><th colspan="2">NON KAR. MODELS</th></tr>
<tr><th>ASIA</th><th>EUROPE</th></tr>
<tr><td>PK404</td><td>*</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>CL424</td><td>*</td><td>0R</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>CL423</td><td>-</td><td>-</td><td>-</td><td>*</td><td>-</td><td>-</td></tr>
<tr><td>DK425</td><td>-</td><td>-</td><td>-</td><td>*</td><td>-</td><td>-</td></tr>
<tr><td>DJ425</td><td>*</td><td>-</td><td>-</td><td>*</td><td>-</td><td>-</td></tr>
<tr><td>RL025</td><td>*</td><td>-</td><td>-</td><td>*</td><td>*</td><td>*</td></tr>
<tr><td>RK403</td><td>-</td><td>-</td><td>-</td><td>*</td><td>-</td><td>-</td></tr>
<tr><td>RK405</td><td>-</td><td>-</td><td>-</td><td>- (WITHOUT KAR MODE)
* (WITH KAR MODE)</td><td>-</td><td>-</td></tr>
<tr><td>RK425</td><td>-</td><td>-</td><td>*</td><td>*</td><td>-</td><td>-</td></tr>
<tr><td>RL425</td><td>-</td><td>-</td><td>10K</td><td>10K</td><td>0R</td><td>-</td></tr>
<tr><td>RJ023</td><td>-</td><td>-</td><td>-</td><td>*</td><td>-</td><td>-</td></tr>
<tr><td>RK023</td><td>-</td><td>-</td><td>-</td><td>*</td><td>-</td><td>-</td></tr>
<tr><td>JJ401</td><td>-</td><td>-</td><td>-</td><td>*</td><td>-</td><td>-</td></tr>
<tr><td>JL402</td><td>-</td><td>-</td><td>*</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>JL403</td><td>-</td><td>-</td><td>-</td><td>* (WITHOUT KAR MODE)
- (WITHKAR MODE)</td><td>-</td><td>-</td></tr>
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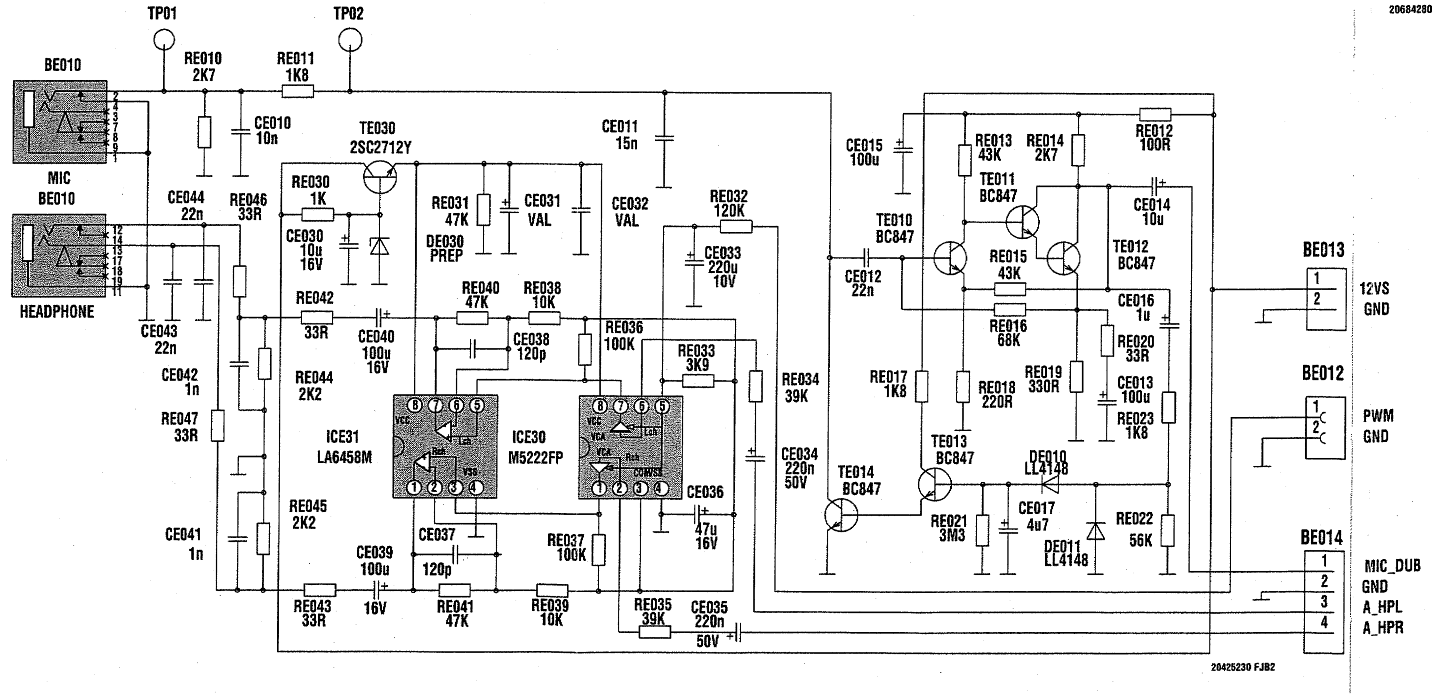
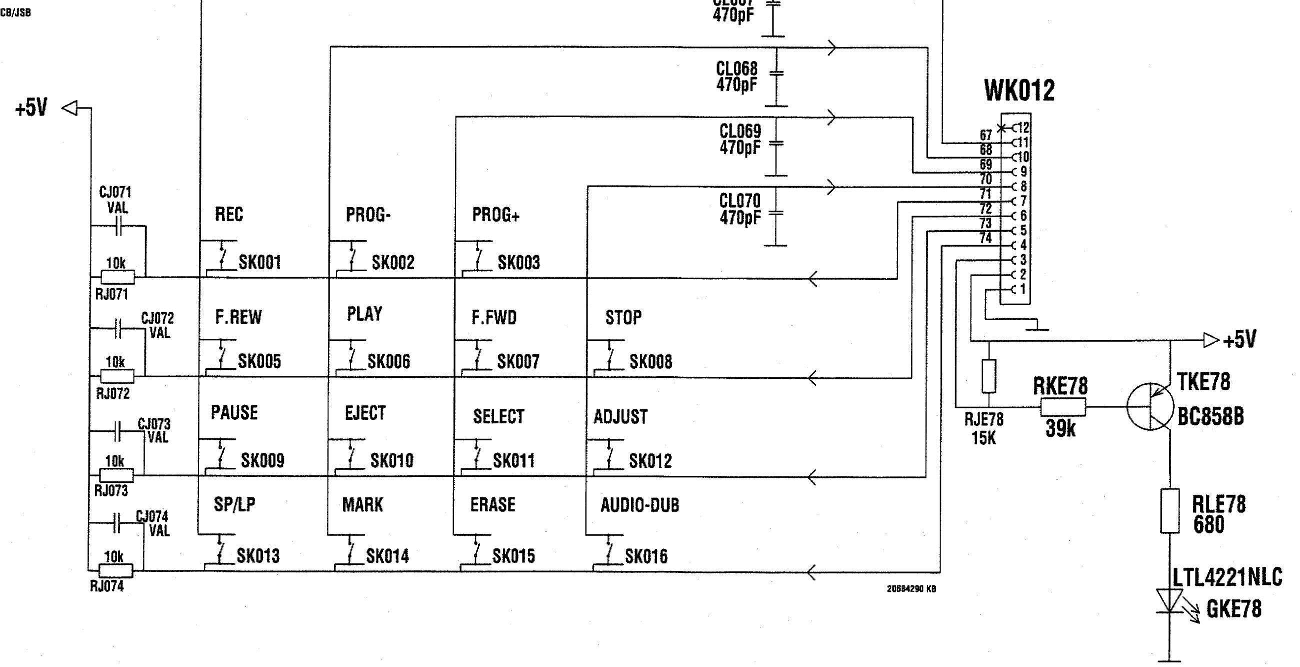
-: DELETE *: INSERT


TP01
TP02
RE010 2K7
RE011 1K8
BE010
MIC
HEADPHONE
CE010 10n
TE030 2SC2712Y
CE011 15n
RE030 1K
CE030 10u 16V
RE031 47K
CE031 VAL
CE032 VAL
DE030 PREP
CE044 22n
RE046 33R
CE043 22n
CE042 1n
RE047 33R
CE041 1n
RE042 33R
CE040 100u 16V
RE044 2K2
RE045 2K2
RE040 47K
RE038 10K
CE038 120p
RE036 100K
RE032 120K
CE033 220u 10V
RE033 3K9
ICE31 LA6458M
ICE30 M5222FP
CE036
CE037 120p
RE037 100K
CE039 100u 16V
RE043 33R
RE041 47K
RE039 10K
RE035 39K
CE035 220n 50V
RE034 39K
CE034 220n 50V
TE014 BC847
CE015 100u
TE010 BC847
CE012 22n
RE013 43K
RE014 2K7
TE011 BC847
RE015 43K
RE016 68K
RE017 1K8
RE018 220R
RE019 330R
TE013 BC847
DE010 LL4148
RE021 3M3
CE017 4u7
DE011 LL4148
RE012 100R
CE014 10u
TE012 BC847
CE016 1u
RE020 33R
CE013 100u
RE023 1K8
RE022 56K
BE013
12VS
GND
BE012
PWM
GND
BE014
MIC_DUB
GND
A_HPL
A_HPR
20425230 FJB2

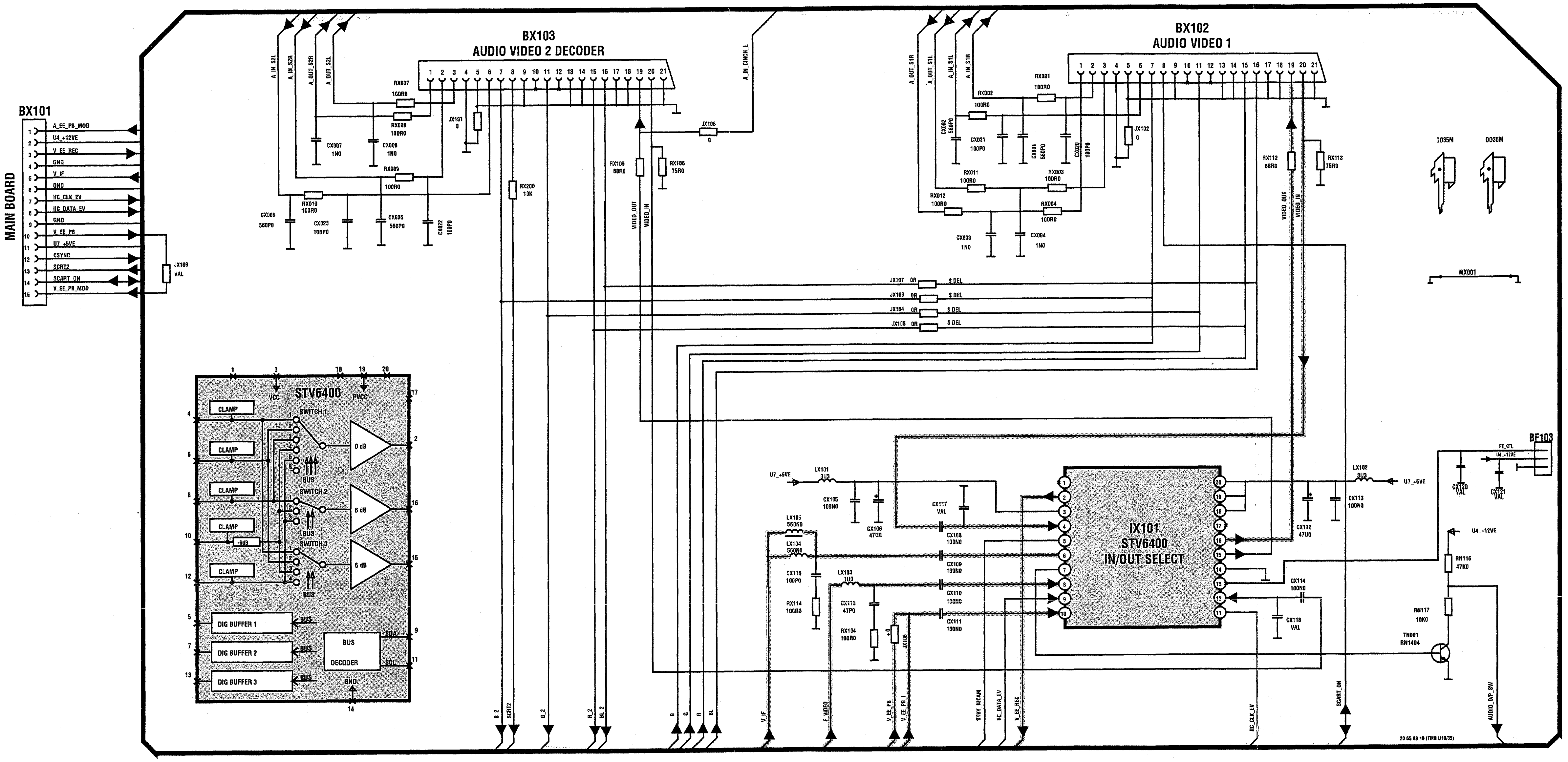

+5V
CL067 470pF
CL068 470pF
CL069 470pF
CL070 470pF
WK012
CJ071 VAL
RJ071 10k
CJ072 VAL
RJ072 10k
CJ073 VAL
RJ073 10k
CJ074 VAL
RJ074 10k
REC
SK001
PROG-
SK002
PROG+
SK003
F.REW
SK005
PLAY
SK006
F.FWD
SK007
STOP
SK008
PAUSE
SK009
EJECT
SK010
SELECT
SK011
ADJUST
SK012
SP/LP
SK013
MARK
SK014
ERASE
SK015
AUDIO-DUB
SK016
RJE78 15K
RKE78 39k
TKE78 BC858B
RLE78 680
LTL4221NLC
GKE78
20694290 KB

Updated 09 / 97

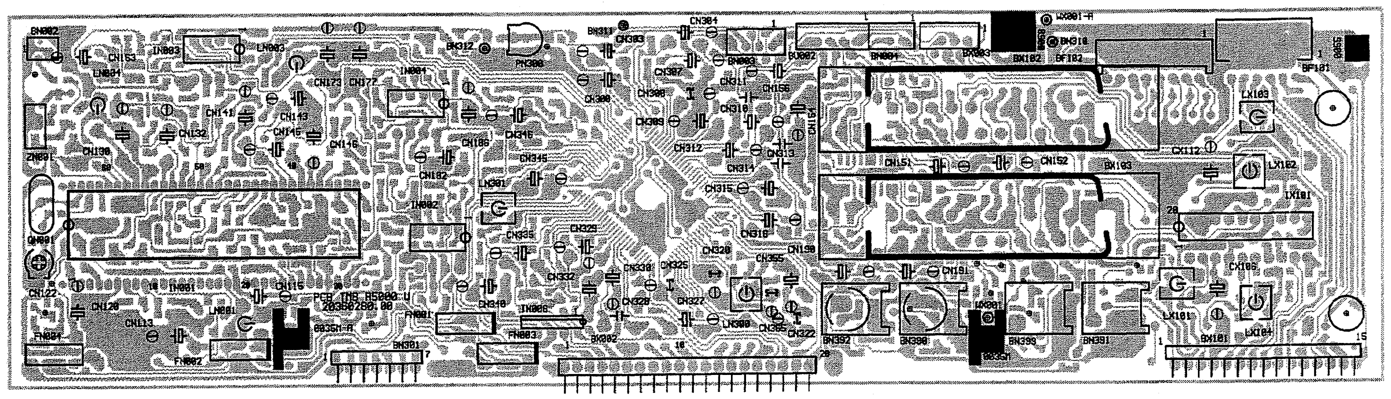
AUDIO HIFI / SCART CONNECTION BOARD - PLATINE AUDIO HIFI / PRISES SCART - LEITERPLATTE AUDIO HIFI / SCART - PIASTRA AUDIO HIFI / SCART - PLATINA AUDIO HIFI / SCART

SCHEMATIC DIAGRAM (SCART CONNECTION) - SCHEMA DE PRINCIPE (SCART) - SCHALTBILD (SCART) - SCHEMA (SCART) - ESQUEMA (SCART)

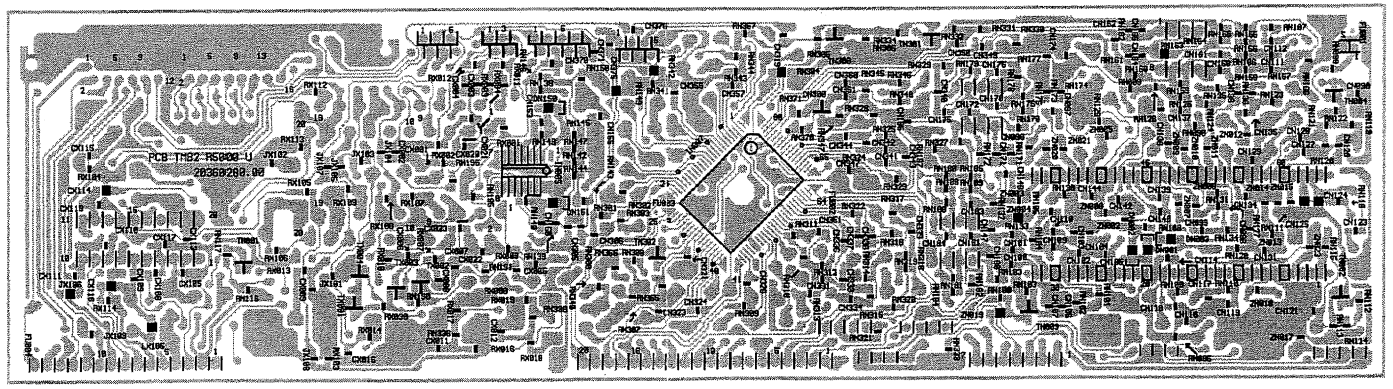
VPH 6600 N - VPH 6601 - M 9560 HIFI/SA - T 8006 HIFI - V 3450 SV - VR 6081 - VR 6087/F - VR 7081 - VR 8083H - VR 8087


BX101
MAIN BOARD
BX103
AUDIO VIDEO 2 DECODER
BX102
AUDIO VIDEO 1
STV6400
IX101
STV6400
IN/OUT SELECT
BF103
CLAMP
SWITCH 1
SWITCH 2
SWITCH 3
DIG BUFFER 1
DIG BUFFER 2
DIG BUFFER 3
BUS DECODER
WX001
D035M

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes



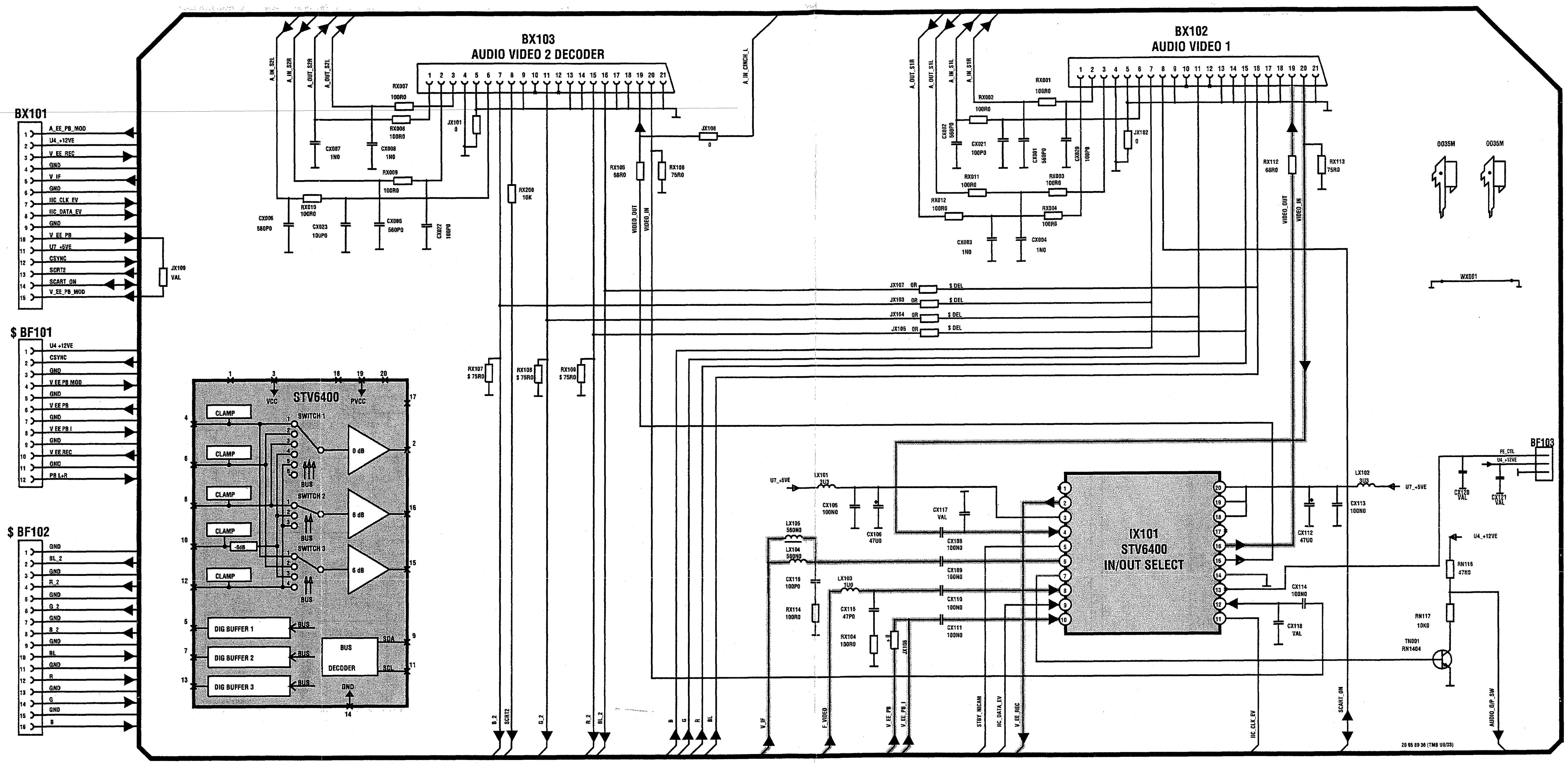
Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre



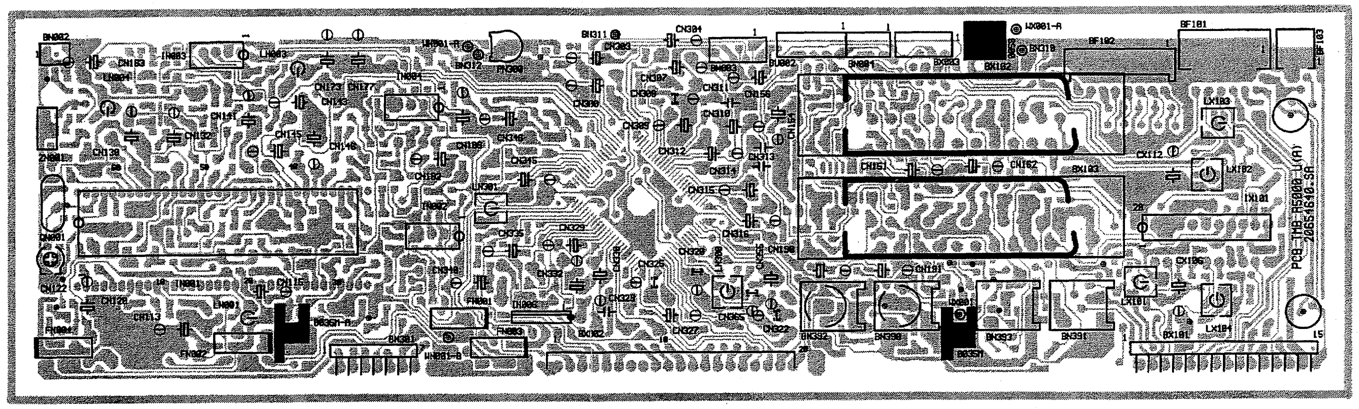
AUDIO HIFI / SCART CONNECTION BOARD - PLATINE AUDIO HIFI / PRISES SCART - LEITERPLATTE AUDIO HIFI / SCART - PIASTRA AUDIO HIFI / SCART - PLATINA AUDIO HIFI / SCART

SCHEMATIC DIAGRAM (SCART CONNECTION) - SCHEMA DE PRINCIPE (SCART) - SCHALTBILD (SCART) - SCHEMA (SCART) - ESQUEMA (SCART)

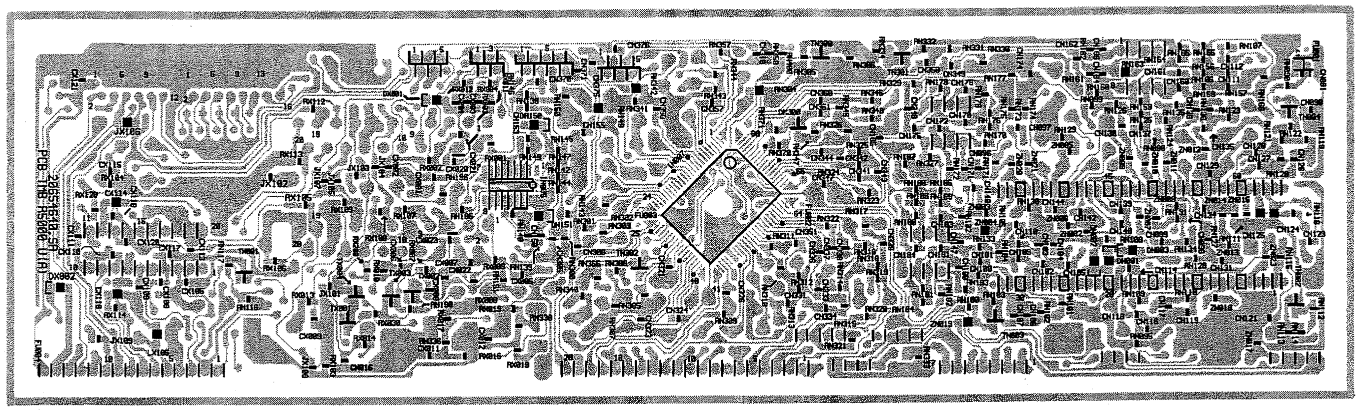
VPH 6680 - VP 6697SENSAR - VPH 6750 - VPH 6751 - VPH 6780 - VPH 6790 - M 9571 HIFI - M 9680 HIFI


BX103
AUDIO VIDEO 2 DECODER
BX102
AUDIO VIDEO 1
BX101
A_EE_PB_MOD
U4_+12VE
V_EE_REC
GND
V_IF
IIC_CLK_EV
IIC_DATA_EV
V_EE_PB
U7_+5VE
CSYNC
SCRT2
SCART_ON
V_EE_PB_MOD
$ BF101
$ BF102
STV6400
CLAMP
SWITCH 1
SWITCH 2
SWITCH 3
0 dB
6 dB
BUS
DIG BUFFER 1
DIG BUFFER 2
DIG BUFFER 3
BUS DECODER
IX101
STV6400
IN/OUT SELECT
BF103
WX001
TN001
A_IN_S2L
A_IN_S2R
A_OUT_S2R
A_OUT_S2L
A_IN_CINCH_L
A_OUT_S1R
A_OUT_S1L
A_IN_S1L
A_IN_S1R
VIDEO_OUT
VIDEO_IN
SCART_ON
AUDIO_O/P_SW
IIC_CLK_EV
IIC_DATA_EV
STBY_NICAM
V_EE_REC
V_EE_PB
F_VIDEO
V_IF

Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes

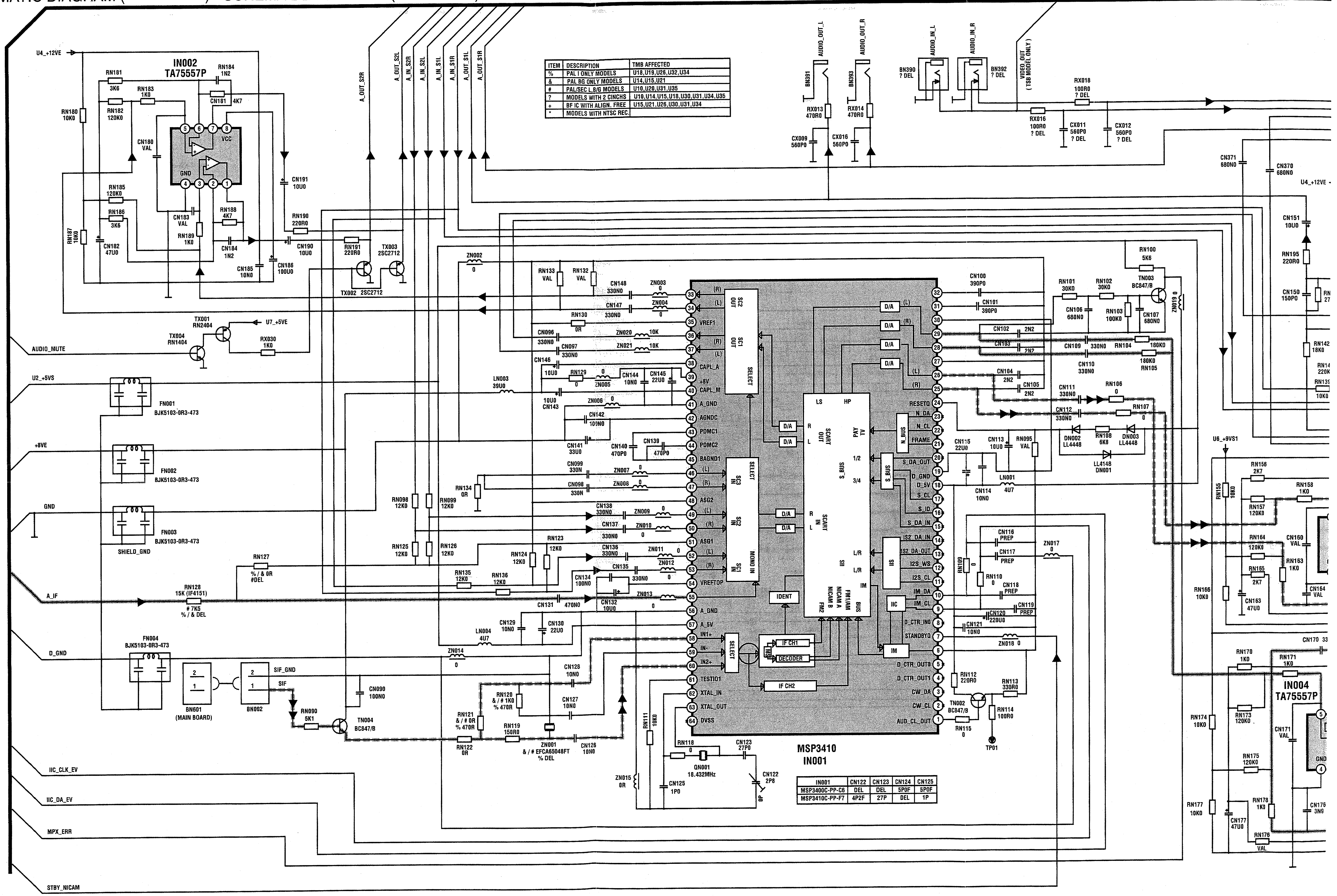


Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre



AUDIO HIFI / SCART CONNECTION BOARD - PLATINE AUDIO HIFI / PRISES SCART - LEITERPLATTE AUDIO HIFI / SCART - PIASTRA AUDIO HIFI / SCART - PLATINA A

SCHEMATIC DIAGRAM (AUDIO HIFI) - SCHEMA DE PRINCIPE (AUDIO HIFI) - SCHALTBILD (AUDIO HIFI) - SCHEMA (AUDIO HIFI) - ESQUEMA (AUDIO HIFI) **M 9560 HIFI/SA - T 8006 HIFI - VPH 6600N**

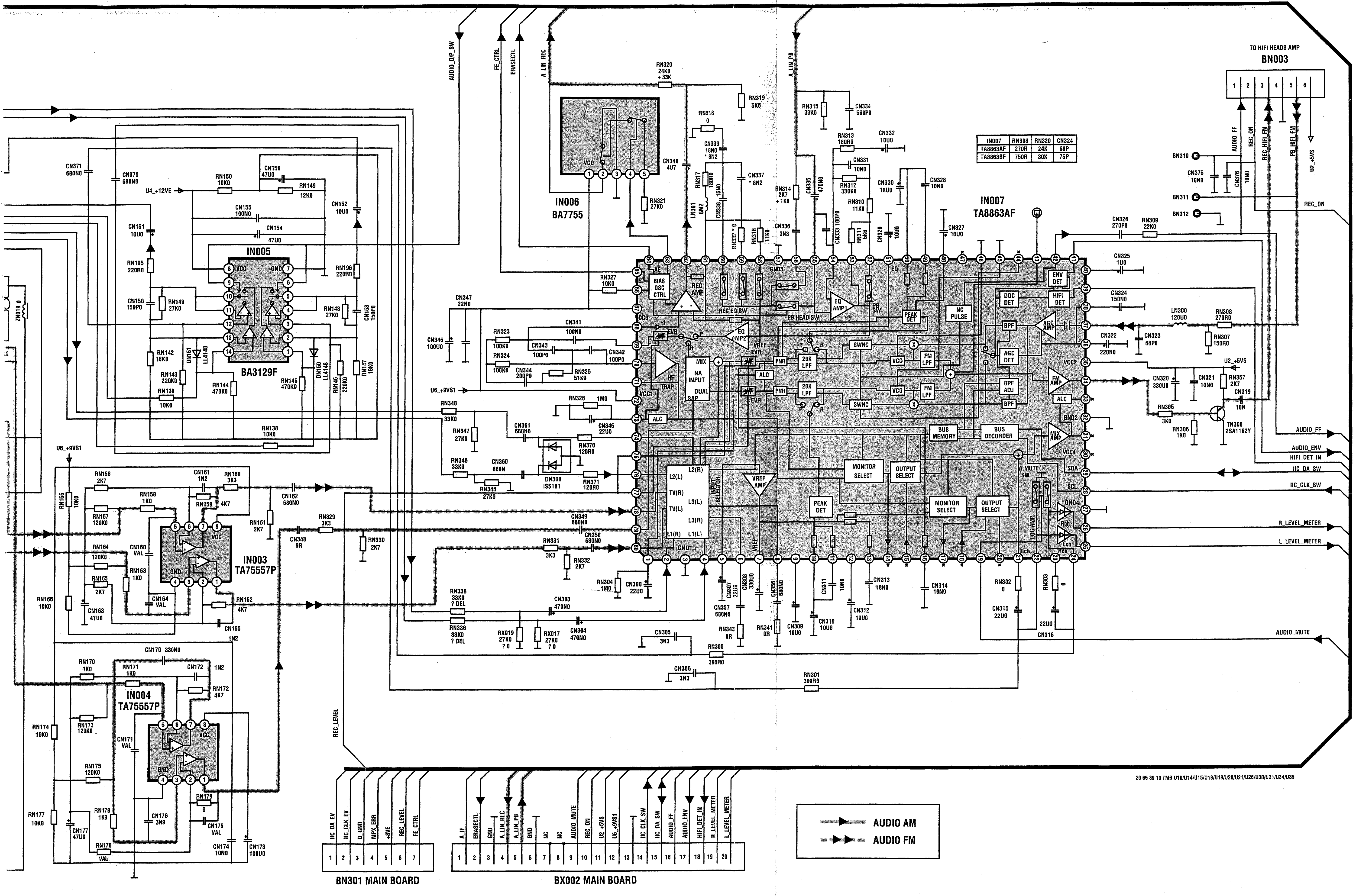

U4_+12VE
IN002
TA75557P
RN181
3K6
RN183
1K0
RN184
1N2
CN181 4K7
RN180
10K0
RN182
120K0
CN180
VAL
VCC
GND
CN191
10U0
RN185
120K0
RN186
3K6
CN183
VAL
RN188
4K7
RN189
1K0
RN190
220R0
RN187
10K0
CN182
47U0
CN184
1N2
CN185
10N0
CN186
100U0
CN190
10U0
RN191
220R0
TX003
2SC2712
TX002 2SC2712
A_OUT_S2R
A_OUT_S2L
A_IN_S2R
A_IN_S2L
A_IN_S1L
A_IN_S1R
A_OUT_S1L
A_OUT_S1R
AUDIO_OUT_L
AUDIO_OUT_R
AUDIO_IN_L
AUDIO_IN_R
VIDEO_OUT
(TSB MODEL ONLY)
BN391
BN393
BN390
? DEL
BN392
? DEL
RX013
470R0
RX014
470R0
CX009
560P0
CX016
560P0
RX018
100R0
? DEL
RX016
100R0
? DEL
CX011
560P0
? DEL
CX012
560P0
? DEL
CN371
680N0
CN370
680N0
U4_+12VE
CN151
10U0
RN195
220R0
CN150
150P0
RN142
18K0
TX001
RN2404
U7_+5VE
TX004
RN1404
RX030
1K0
AUDIO_MUTE
U2_+5VS
FN001
BJK5103-0R3-473
+8VE
FN002
BJK5103-0R3-473
GND
FN003
BJK5103-0R3-473
SHIELD_GND
A_IF
RN128
15K (IF4151)
# 7K5
% / & DEL
RN127
% / & 0R
#DEL
D_GND
FN004
BJK5103-0R3-473
BN601
(MAIN BOARD)
BN002
SIF_GND
SIF
CN090
100N0
RN090
5K1
TN004
BC847/B
IIC_CLK_EV
IIC_DA_EV
MPX_ERR
STBY_NICAM
ZN002
0
RN133
VAL
RN132
VAL
CN148
330N0
ZN003
0
CN147
330N0
ZN004
0
RN130
0R
CN096
330N0
ZN020
10K
CN097
330N0
ZN021
10K
CN146
10U0
RN129
0
ZN005
CN144
10N0
CN145
22U0
LN003
39U0
10U0
CN143
ZN006
0
CN142
100N0
CN141
33U0
CN140
470P0
CN139
470P0
CN099
330N
ZN007
0
CN098
330N
ZN008
0
RN134
0R
RN098
12K0
RN099
12K0
CN138
330N0
ZN009
0
CN137
330N0
ZN010
0
RN123
12K0
CN136
330N0
ZN011
0
RN125
12K0
RN126
12K0
RN124
12K0
ZN012
0
CN135
330N0
RN135
12K0
RN136
12K0
CN134
100N0
CN133
ZN013
0
CN131
470N0
CN132
10U0
CN129
10N0
CN130
22U0
LN004
4U7
ZN014
0
CN128
10N0
RN120
& / # 1K0
% 470R
CN127
10N0
RN121
& / # 0R
% 470R
RN119
150R0
RN122
0R
ZN001
& / # EFCA6504BFT
% DEL
CN126
10N0
RN111
10K0
RN118
0
CN123
27P0
QN001
18.432MHz
CN122
2P8
ZN015
0R
CN125
1P0
MSP3410
IN001
(R)
(L)
SC2 OUT
SC1 OUT
SELECT
SC3 IN
SC2 IN
SC1 IN
MONO IN
VREF1
CAPL_A
+8V
CAPL_M
A_GND
AGNDC
PDMC1
PDMC2
BAGND1
ASG2
ASG1
VREFTOP
A_GND
A_5V
IN1+
IN-
IN2+
TESTIO1
XTAL_IN
XTAL_OUT
DVSS
D/A
LS
HP
SCART OUT
PAY
TV
1/2
3/4
S_BUS
SCART IN
L/R
SII
IM
IDENT
FM1/AM
NICAM A
NICAM B
FM2
BUS
IF CH1
MSP
DECODER
IF CH2
N_BUS
I2S
IIC
RESETQ
N_DA
N_CL
FRAME
S_DA_OUT
D_GND
D_5V
S_CL
S_ID
S_DA_IN
I2S_DA_IN
I2S_DA_OUT
I2S_WS
I2S_CL
IM_DA
IM_CL
D_CTR_IN0
STANDBYQ
D_CTR_OUT0
D_CTR_OUT1
CW_DA
CW_CL
AUD_CL_OUT
CN100
390P0
CN101
390P0
CN102
2N2
CN103
2N2
CN104
2N2
CN105
2N2
CN115
22U0
CN113
10U0
RN095
VAL
CN114
10N0
LN001
4U7
RN109
0
CN116
PREP
CN117
PREP
ZN017
0
RN110
0
CN118
PREP
CN119
PREP
CN120
220U0
CN121
10N0
ZN018
0
RN112
220R0
RN113
330R0
TN002
BC847/B
RN114
100R0
RN115
0
TP01
RN100
5K6
RN101
30K0
RN102
30K0
TN003
BC847/B
ZN019
0
CN106
680N0
RN103
100K0
CN107
680N0
CN109
330N0
RN104
180K0
CN110
330N0
180K0
RN105
CN111
330N0
RN106
0
CN112
330N0
RN107
0
DN002
LL4448
RN108
6K8
DN003
LL4448
LL4148
DN001
U6_+9VS1
RN155
10K0
RN156
2K7
RN157
120K0
RN158
1K0
RN164
120K0
CN160
VAL
RN163
1K0
RN165
2K7
RN166
10K0
CN163
47U0
CN164
VAL
CN170
RN170
1K0
RN171
1K0
IN004
TA75557P
RN174
10K0
RN173
120K0
CN171
VAL
GND
RN175
120K0
RN177
10K0
RN178
1K0
CN177
47U0
CN176
3N9
RN176
VAL
RN14
220K
RN13
10K0

ITEM	DESCRIPTION	TMB AFFECTED
%	PAL I ONLY MODELS	U18,U19,U26,U32,U34
&	PAL BG ONLY MODELS	U14,U15,U21
#	PAL/SEC L,B/G MODELS	U10,U20,U31,U35
?	MODELS WITH 2 CINCHS	U10,U14,U15,U18,U30,U31,U34,U35
+	BF IC WITH ALIGN. FREE	U15,U21,U26,U30,U31,U34
*	MODELS WITH NTSC REC.	

IN001	CN122	CN123	CN124	CN125
MSP3400C-PP-C6	DEL	DEL	5P0F	5P0F
MSP3410C-PP-F7	4P2F	27P	DEL	1P

/ SCART - PLATINA AUDIO HIFI /

T 8006 HIFI - VPH 6600N - VPH 6601 - V 3450 SV - VR 6081 - VR 6087/F - VR 7081 - VR 8083SH - VR 8087



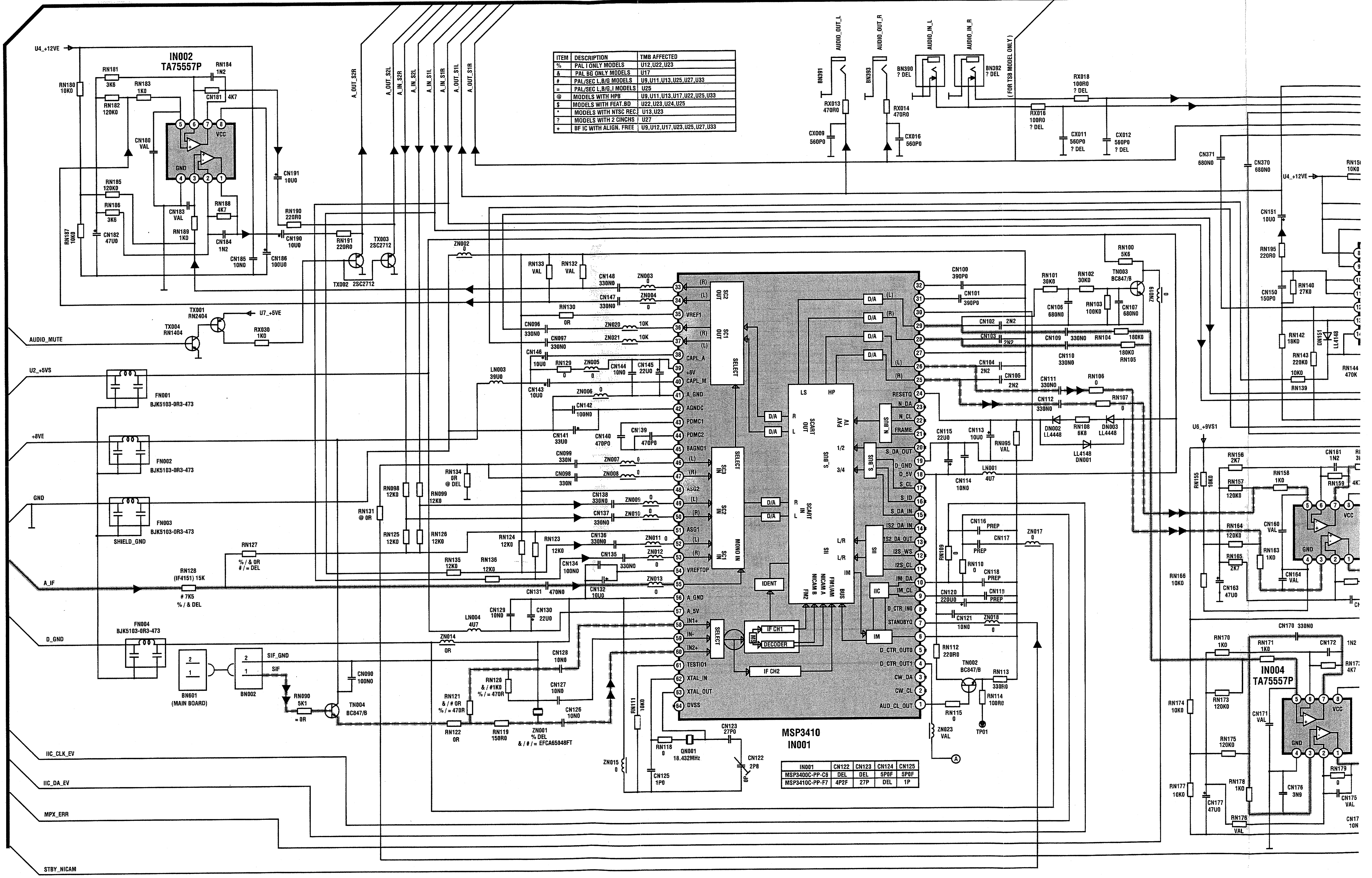
AUDIO_O/P_SW
FE_CTRL
ERASECTL
A_LIN_REC
A_LIN_PB
TO HIFI HEADS AMP
BN003
AUDIO_FF
REC_ON
REC_HIFI_FM
PB_HIFI_FM
U2_+5VS
BN310
BN311
BN312
IN006
BA7755
IN005
BA3129F
IN007
TA8863AF
IN003
TA75557P
IN004
TA75557P
U4_+12VE
U6_+9VS1
TN300
2SA1162Y
DN300
ISS181
BIAS OSC CTRL
REC AMP
REC EQ SW
PB HEAD SW
EQ AMP1
EQ AMP2
PEAK DET
NC PULSE
ENV DET
DOC DET
HIFI DET
AGC AMP
AGC DET
BPF
BPF ADJ
FM AMP
ALC
MIX AMP
HF TRAP
MIX
NA INPUT
DUAL SAP
EVR
PNR
20K LPF
SWNC
VCO
FM LPF
BUS MEMORY
BUS DECORDER
MONITOR SELECT
OUTPUT SELECT
VREF AMP
INPUT SELECTOR
A.MUTE SW
LOG AMP
SDA
SCL
AUDIO_ENV
HIFI_DET_IN
IIC_DA_SW
IIC_CLK_SW
R_LEVEL_METER
L_LEVEL_METER
AUDIO_MUTE
REC_LEVEL
IIC_DA_EV
IIC_CLK_EV
D_GND
MPX_ERR
+8VE
A_IF
GND
NC
U6_+9VS1
BN301 MAIN BOARD
BX002 MAIN BOARD
AUDIO AM
AUDIO FM

IN007	RN308	RN320	CN324
TA8863AF	270R	24K	68P
TA8863BF	750R	30K	75P

20 65 89 10 TMB U10/U14/U15/U18/U19/U20/U21/U26/U30/U31/U34/U35

AUDIO HIFI / SCART CONNECTION BOARD - PLATINE AUDIO HIFI / PRISES SCART - LEITERPLATTE AUDIO HIFI / SCART - PIASTRA AUDIO HIFI / SCART - PLATINA AUDI

SCHEMATIC DIAGRAM (AUDIO HIFI) - SCHEMA DE PRINCIPE (AUDIO HIFI) - SCHALTBILD (AUDIO HIFI) - SCHEMA (AUDIO HIFI) - ESQUEMA (AUDIO HIFI) **VPH 6680 - VPH 6697SENSAR - VPH 6750 - VP**



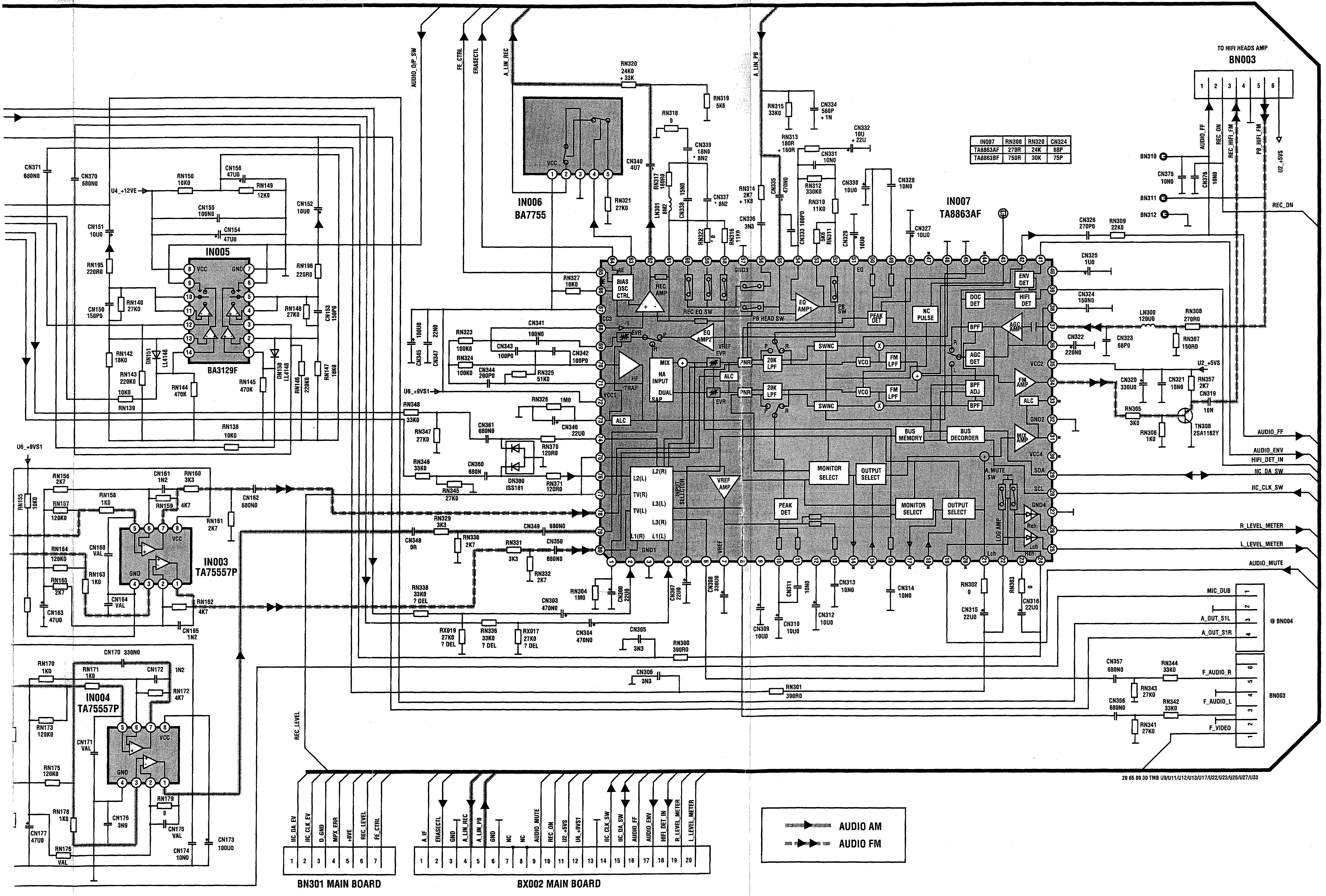
U4_+12VE
IN002
TA75557P
RN180 10K0
RN181 3K6
RN183 1K0
RN182 120K0
RN184 1N2
CN181 4K7
CN180 VAL
VCC
GND
CN191 10U0
RN185 120K0
RN186 3K6
RN187 10K0
CN182 47U0
CN183 VAL
RN188 4K7
RN189 1K0
CN184 1N2
CN185 10N0
CN186 100U0
RN190 220R0
CN190 10U0
RN191 220R0
TX003 2SC2712
TX002 2SC2712
A_OUT_S2R
A_OUT_S2L
A_IN_S2R
A_IN_S2L
A_IN_S1L
A_IN_S1R
A_OUT_S1L
A_OUT_S1R
TX001 RN2404
U7_+5VE
TX004 RN1404
RX030 1K0
AUDIO_MUTE
U2_+5VS
FN001 BJK5103-0R3-473
+8VE
FN002 BJK5103-0R3-473
GND
FN003 BJK5103-0R3-473
SHIELD_GND
A_IF
RN127 % / & 0R # / = DEL
RN128 (IF4151) 15K
# 7K5 % / & DEL
D_GND
FN004 BJK5103-0R3-473
BN601 (MAIN BOARD)
BN002
SIF_GND
SIF
RN090 5K1 = 0R
TN004 BC847/B
CN090 100N0
IIC_CLK_EV
IIC_DA_EV
MPX_ERR
STBY_NICAM
ZN002 0
RN133 VAL
RN132 VAL
CN148 330N0
ZN003 0
CN147 330N0
ZN004 0
RN130 0R
CN096 330N0
ZN020 10K
CN097 330N0
ZN021 10K
CN146 10U0
RN129 0
ZN005 0
CN144 10N0
CN145 22U0
LN003 39U0
CN143 10U0
ZN006 0
CN142 100N0
CN141 33U0
CN140 470P0
CN139 470P0
CN099 330N
ZN007 0
CN098 330N
ZN008 0
RN134 0R @ DEL
RN098 12K0
RN099 12K0
RN131 @ 0R
CN138 330N0
ZN009 0
CN137 330N0
ZN010 0
RN125 12K0
RN126 12K0
RN124 12K0
RN123 12K0
CN136 330N0
ZN011 0
CN135 330N0
ZN012 0
RN135 12K0
RN136 12K0
CN134 100N0
CN131 470N0
CN132 10U0
ZN013 0
CN129 10N0
CN130 22U0
LN004 4U7
ZN014 0R
CN128 10N0
RN120 & / # 1K0 % / = 470R
CN127 10N0
RN121 & / # 0R % / = 470R
CN126 10N0
RN122 0R
RN119 150R0
ZN001 % DEL & / # / = EFCA6504BFT
ZN015 0
RN111 10K0
RN118 0
QN001 18.432MHz
CN123 27P0
CN122 2P8
CN125 1P0
MSP3410
IN001
VREF1
CAPL_A
+8V
CAPL_M
A_GND
AGNDC
PDMC1
PDMC2
BAGND1
ASG2
ASG1
VREFTOP
A_5V
IN1+
IN-
IN2+
TESTIO1
XTAL_IN
XTAL_OUT
DVSS
SC2 OUT
SC1 OUT
SELECT
SC3 IN
SC2 IN
MONO IN
SC1 IN
D/A
LS
HP
SCART OUT
SUB_S
SCART IN
AV
PAY
1/2
3/4
L/R
SII
IM
FM/AM
NICAM A
NICAM B
FM2
BUS
IDENT
IF CH1
DECODER
IF CH2
MIX
IIC
N_BUS
S_BUS
RESETQ
N_DA
N_CL
FRAME
S_DA_OUT
D_GND
D_5V
S_CL
S_ID
S_DA_IN
I2S_DA_IN
I2S_DA_OUT
I2S_WS
I2S_CL
IM_DA
IM_CL
D_CTR_IN0
STANDBYQ
D_CTR_OUT0
D_CTR_OUT1
CW_DA
CW_CL
AUD_CL_OUT
AUDIO_OUT_L
AUDIO_OUT_R
AUDIO_IN_L
AUDIO_IN_R
BN391
BN393
BN390 ? DEL
BN392 ? DEL
(FOR TSB MODEL ONLY)
RX013 470R0
RX014 470R0
CX009 560P0
CX016 560P0
RX018 100R0 ? DEL
RX016 100R0 ? DEL
CX011 560P0 ? DEL
CX012 560P0 ? DEL
CN371 680N0
CN370 680N0
RN150 10K0
CN100 390P0
CN101 390P0
RN101 30K0
RN102 30K0
RN100 5K6
TN003 BC847/B
ZN019 0
CN106 680N0
RN103 100K0
CN107 680N0
CN102 2N2
CN103 2N2
CN109 330N0
RN104 180K0
CN110 330N0
RN105 180K0
CN104 2N2
CN105 2N2
CN111 330N0
RN106 0
CN112 330N0
RN107 0
DN002 LL4448
RN108 6K8
DN003 LL4448
LL4148 DN001
CN115 22U0
CN113 10U0
RN095 VAL
LN001 4U7
CN114 10N0
CN116 PREP
CN117 PREP
ZN017 0
RN109 0
RN110 0
CN118 PREP
CN119 PREP
CN120 220U0
CN121 10N0
ZN018 0
RN112 220R0
TN002 BC847/B
RN113 330R0
RN114 100R0
RN115 0
ZN023 VAL
TP01
A
U6_+9VS1
CN151 10U0
RN195 220R0
CN150 150P0
RN140 27K0
RN142 18K0
DN151 LL4148
RN143 220K0
RN139 10K0
RN144 470K
RN155 10K0
RN156 2K7
RN157 120K0
RN158 1K0
RN159 4K7
CN161 1N2
CN160 VAL
RN164 120K0
RN165 2K7
RN163 1K0
CN164 VAL
RN166 10K0
CN163 47U0
CN170 330N0
RN170 1K0
RN171 1K0
CN172 1N2
RN172 4K7
IN004
TA75557P
RN173 120K0
RN174 10K0
CN171 VAL
RN175 120K0
RN177 10K0
CN177 47U0
RN178 1K0
CN176 3N9
RN179 0
CN175 VAL
RN176 VAL
CN17 10N

ITEM	DESCRIPTION	TMB AFFECTED
%	PAL I ONLY MODELS	U12,U22,U23
&	PAL BG ONLY MODELS	U17
#	PAL/SEC L,B/G MODELS	U9,U11,U13,U25,U27,U33
=	PAL/SEC L,B/G,I MODELS	U25
@	MODELS WITH HPB	U9,U11,U13,U17,U22,U25,U33
$	MODELS WITH FEAT.BD	U22,U23,U24,U25
*	MODELS WITH NTSC REC.	U13,U23
?	MODELS WITH 2 CINCHS	U27
+	BF IC WITH ALIGN. FREE	U9,U12,U17,U23,U25,U27,U33

IN001	CN122	CN123	CN124	CN125
MSP3400C-PP-C6	DEL	DEL	5P0F	5P0F
MSP3410C-PP-F7	4P2F	27P	DEL	1P

CART - PLATINA AUDIO HIFI /

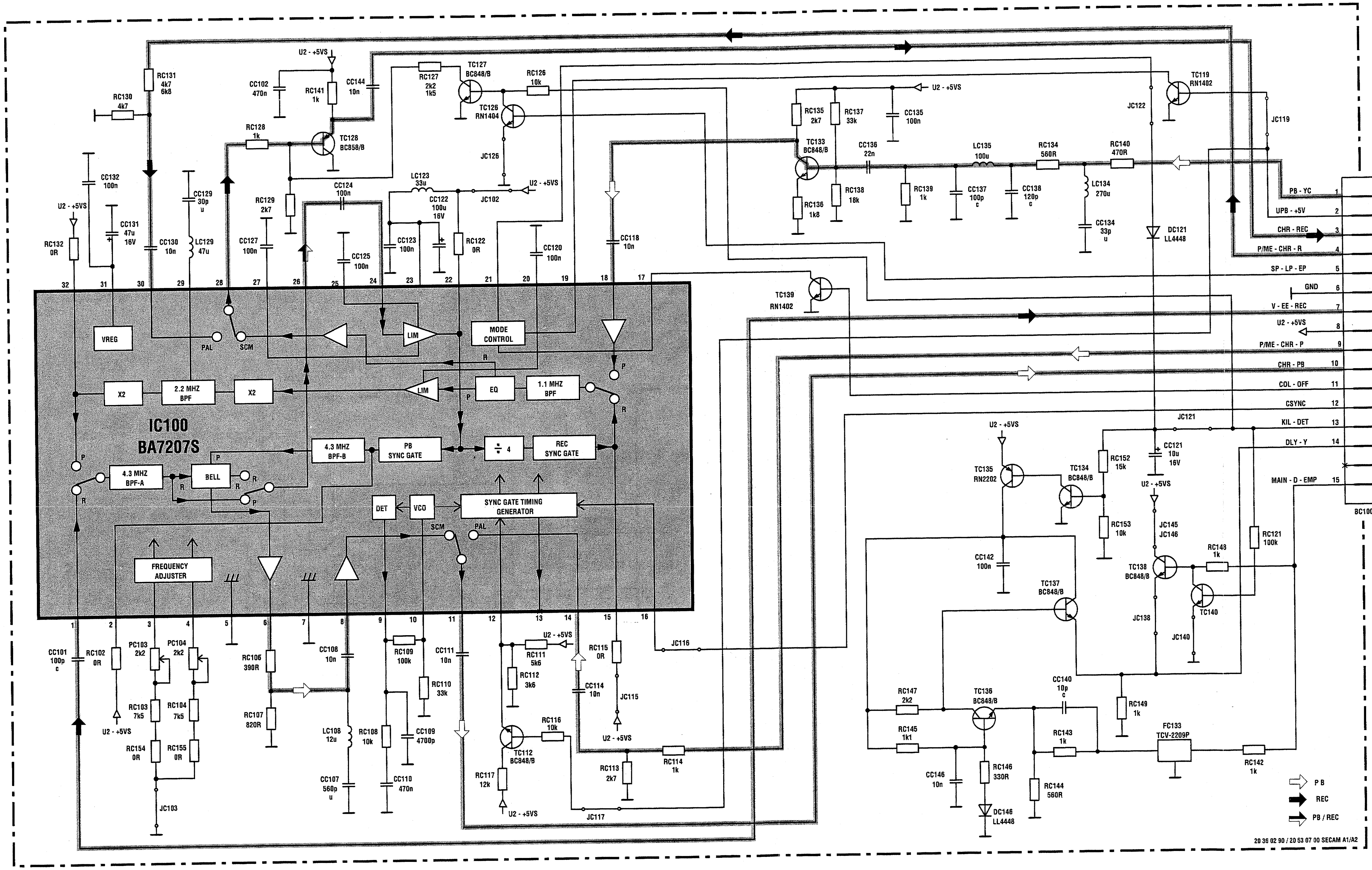
7SENSAR - VPH 6750 - VPH 6751 - VPH 6780 - VPH 6790 - M 9571 HIFI - M 9680 HIFI

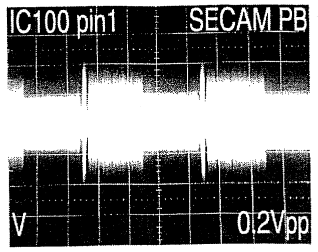

IN005
BA3129F
IN006
BA7755
IN007
TA8863AF
IN003
TA75557P
IN004
TA75557P
TO HIFI HEADS AMP
BN003
AUDIO_O/P_SW
FE_CTRL
ERASECTL
A_LIN_REC
A_LIN_PB
AUDIO_FF
REC_ON
REC_HIFI_FM
PB_HIFI_FM
U2_+5VS
U4_+12VE
U6_+9VS1
BN310
BN311
BN312
TN300
2SA1162Y
BIAS OSC CTRL
REC AMP
REC EQ SW
PB HEAD SW
EQ AMP1
EQ AMP2
PEAK DET
NC PULSE
DOC DET
HIFI DET
ENV DET
AGC AMP
AGC DET
BPF
BPF ADJ
FM AMP
MIX AMP
ALC
SWNC
VCO
FM LPF
20K LPF
PNR
HF TRAP
MIX NA INPUT DUAL SAP
BUS MEMORY
BUS DECORDER
MONITOR SELECT
OUTPUT SELECT
INPUT SELECTOR
VREF AMP
A.MUTE SW
LOG AMP
AUDIO_FF
AUDIO_ENV
HIFI_DET_IN
IIC_DA_SW
IIC_CLK_SW
R_LEVEL_METER
L_LEVEL_METER
AUDIO_MUTE
MIC_DUB
A_OUT_S1L
A_OUT_S1R
@ BN004
F_AUDIO_R
F_AUDIO_L
F_VIDEO
BN003
REC_LEVEL
IIC_DA_EV
IIC_CLK_EV
D_GND
MPX_ERR
+8VE
REC_LEVEL
FE_CTRL
A_IF
ERASECTL
GND
A_LIN_REC
A_LIN_PB
GND
NC
NC
AUDIO_MUTE
REC_ON
U2_+5VS
U6_+9VS1
IIC_CLK_SW
IIC_DA_SW
AUDIO_FF
AUDIO_ENV
HIFI_DET_IN
R_LEVEL_METER
L_LEVEL_METER
BN301 MAIN BOARD
BX002 MAIN BOARD
AUDIO AM
AUDIO FM
20 65 89 30 TMB U9/U11/U12/U13/U17/U22/U23/U25/U27/U33

IN007	RN308	RN320	CN324
TA8863AF	270R	24K	68P
TA8863BF	750R	30K	75P

SECAM SUB BOARD - PLATINE SECAM - SUB MODUL SECAM - PIASTRA SECAM - PLATINA SECAM

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA


IC100
BA7207S
VREG
PAL
SCM
LIM
MODE CONTROL
X2
2.2 MHZ BPF
EQ
1.1 MHZ BPF
4.3 MHZ BPF-B
PB SYNC GATE
÷ 4
REC SYNC GATE
4.3 MHZ BPF-A
BELL
DET
VCO
SYNC GATE TIMING GENERATOR
FREQUENCY ADJUSTER
RC131 4k7 6k8
RC130 4k7
CC102 470n
RC141 1k
CC144 10n
RC127 2k2 1k5
TC127 BC848/B
RC126 10k
TC126 RN1404
RC128 1k
TC128 BC858/B
JC126
CC132 100n
CC129 30p
CC131 47u 16V
RC132 0R
CC130 10n
LC129 47u
CC127 100n
RC129 2k7
CC124 100n
LC123 33u
CC122 100u 16V
JC102
CC123 100n
RC122 0R
CC125 100n
CC120 100n
CC118 10n
U2 - +5VS
RC135 2k7
RC137 33k
CC135 100n
TC133 BC848/B
CC136 22n
LC135 100u
RC134 560R
RC140 470R
RC138 18k
RC139 1k
CC137 100p
CC138 120p
LC134 270u
CC134 33p
RC136 1k8
TC119 RN1402
JC122
JC119
DC121 LL4448
TC139 RN1402
PB - YC
UPB - +5V
CHR - REC
P/ME - CHR - R
SP - LP - EP
GND
V - EE - REC
U2 - +5VS
P/ME - CHR - P
CHR - PB
COL - OFF
CSYNC
KIL - DET
DLY - Y
MAIN - D - EMP
BC100
to MAIN BOARD MAIN VIDEO PAL/MES/SEC/NTSC
JC121
CC121 10u 16V
RC152 15k
TC135 RN2202
TC134 BC848/B
RC153 10k
JC145 JC146
RC148 1k
RC121 100k
CC142 100n
TC138 BC848/B
TC140
TC137 BC848/B
JC138
JC140
CC101 100p
RC102 0R
PC103 2k2
PC104 2k2
RC106 390R
RC103 7k5
RC104 7k5
RC107 820R
RC154 0R
RC155 0R
JC103
CC108 10n
RC109 100k
CC111 10n
RC110 33k
LC108 12u
RC108 10k
CC109 4700p
CC107 560p
CC110 470n
RC111 5k6
RC112 3k6
RC115 0R
JC116
CC114 10n
JC115
RC116 10k
TC112 BC848/B
RC117 12k
RC113 2k7
RC114 1k
JC117
CC140 10p
RC147 2k2
TC136 BC848/B
RC149 1k
RC145 1k1
RC143 1k
FC133 TCV-2209P
CC146 10n
RC146 330R
RC144 560R
RC142 1k
DC146 LL4448
PB
REC
PB / REC
20 36 02 90 / 20 53 07 00 SECAM A1/A2



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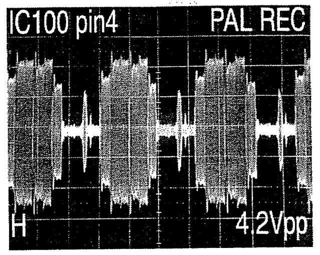

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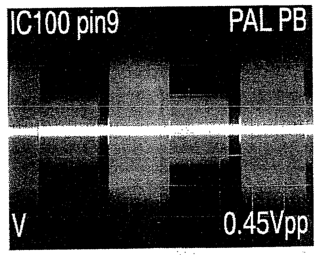

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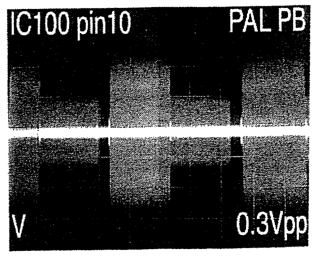
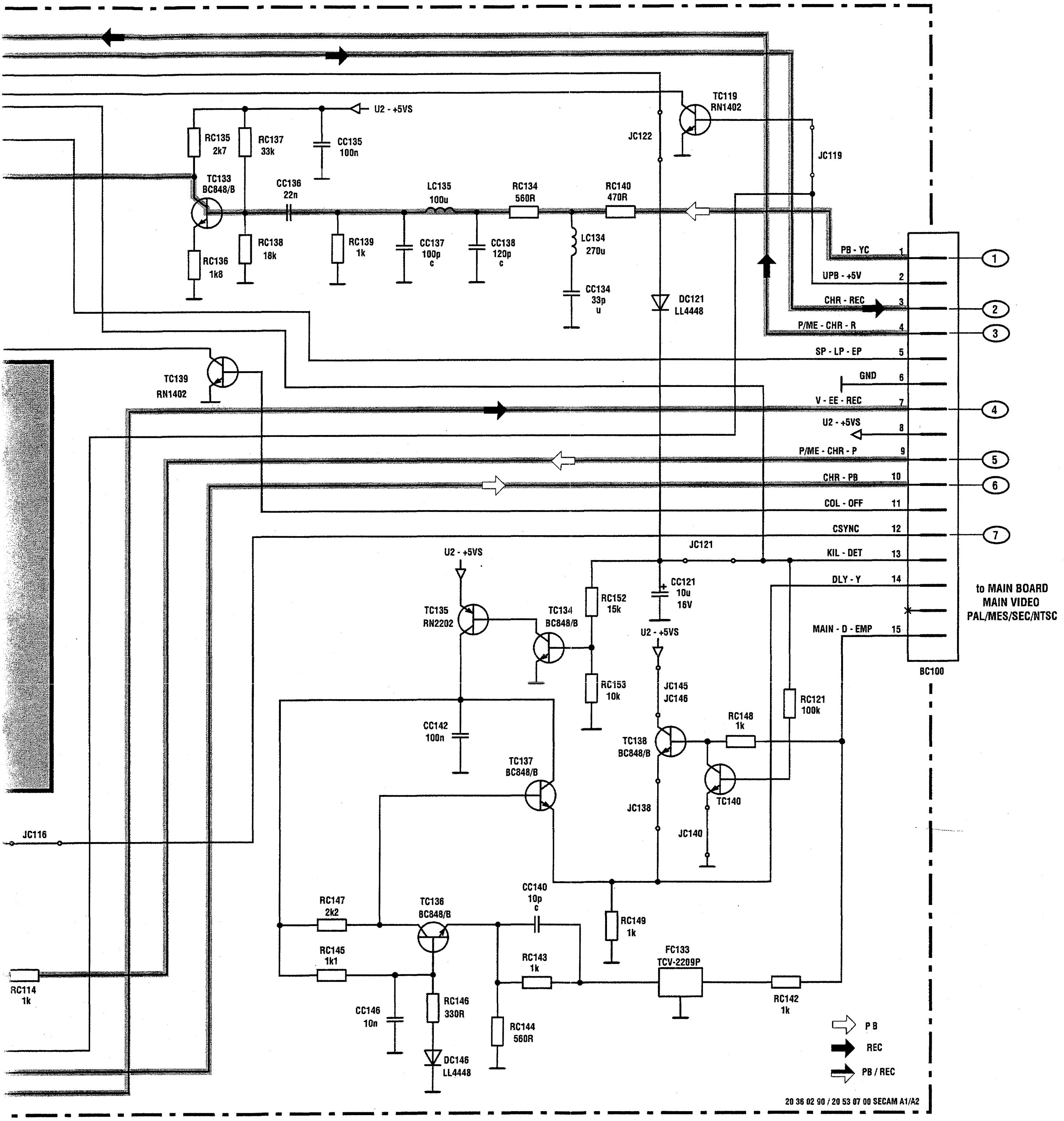


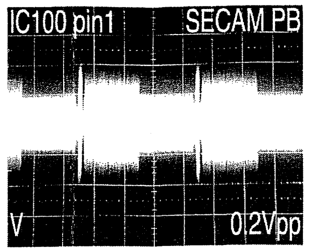
⑦

ASTRA SECAM - PLATINA SECAM

QUEMA

SECAM BOARD - PLATINE SECAM - SECAM LEITERPLATTE PIASTRA SECAM - PLATINA SECAM


U2 - +5VS
TC119
RN1402
RC135
2k7
RC137
33k
CC135
100n
JC122
JC119
TC133
BC848/B
CC136
22n
LC135
100u
RC134
560R
RC140
470R
RC138
18k
RC139
1k
CC137
100p
CC138
120p
LC134
270u
RC136
1k8
CC134
33p
DC121
LL4448
TC139
RN1402
PB - YC
UPB - +5V
CHR - REC
P/ME - CHR - R
SP - LP - EP
GND
V - EE - REC
U2 - +5VS
P/ME - CHR - P
CHR - PB
COL - OFF
CSYNC
KIL - DET
DLY - Y
MAIN - D - EMP
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
①
②
③
④
⑤
⑥
⑦
BC100
to MAIN BOARD
MAIN VIDEO
PAL/MES/SEC/NTSC
JC121
CC121
10u
16V
TC135
RN2202
TC134
BC848/B
RC152
15k
RC153
10k
JC145
JC146
RC148
1k
RC121
100k
TC138
BC848/B
CC142
100n
TC137
BC848/B
TC140
JC138
JC140
JC116
CC140
10p
RC147
2k2
TC136
BC848/B
RC149
1k
RC145
1k1
RC143
1k
FC133
TCV-2209P
RC114
1k
RC146
330R
RC142
1k
CC146
10n
RC144
560R
DC146
LL4448
PB
REC
PB / REC
20 36 02 90 / 20 53 07 00 SECAM A1/A2



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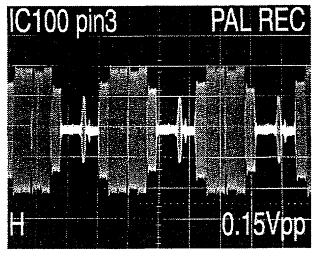

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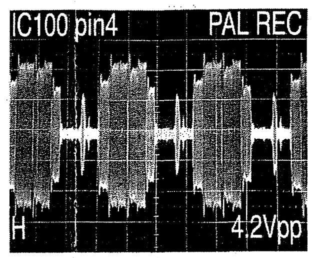
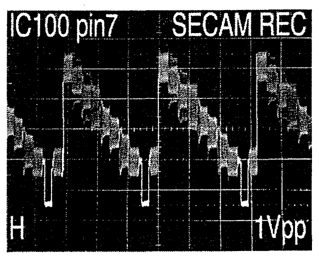


③



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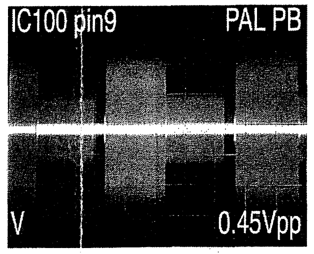

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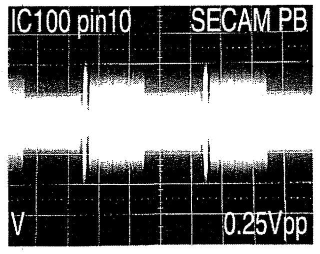

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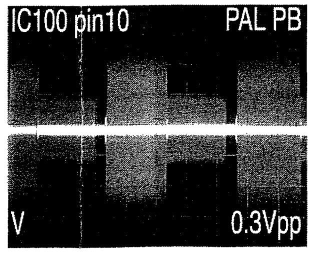

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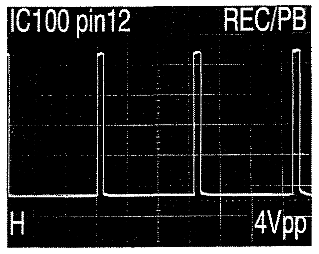
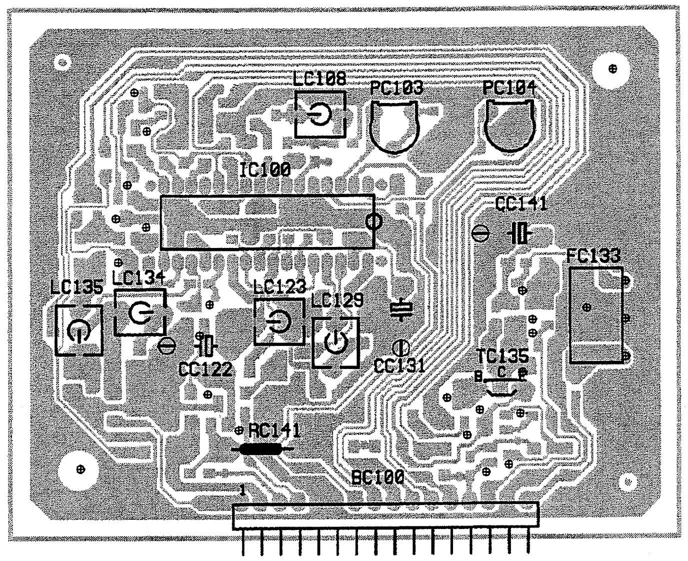
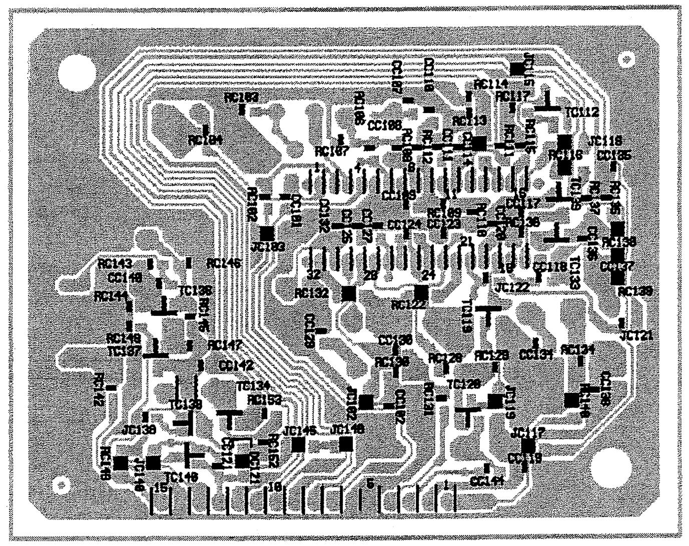


⑧

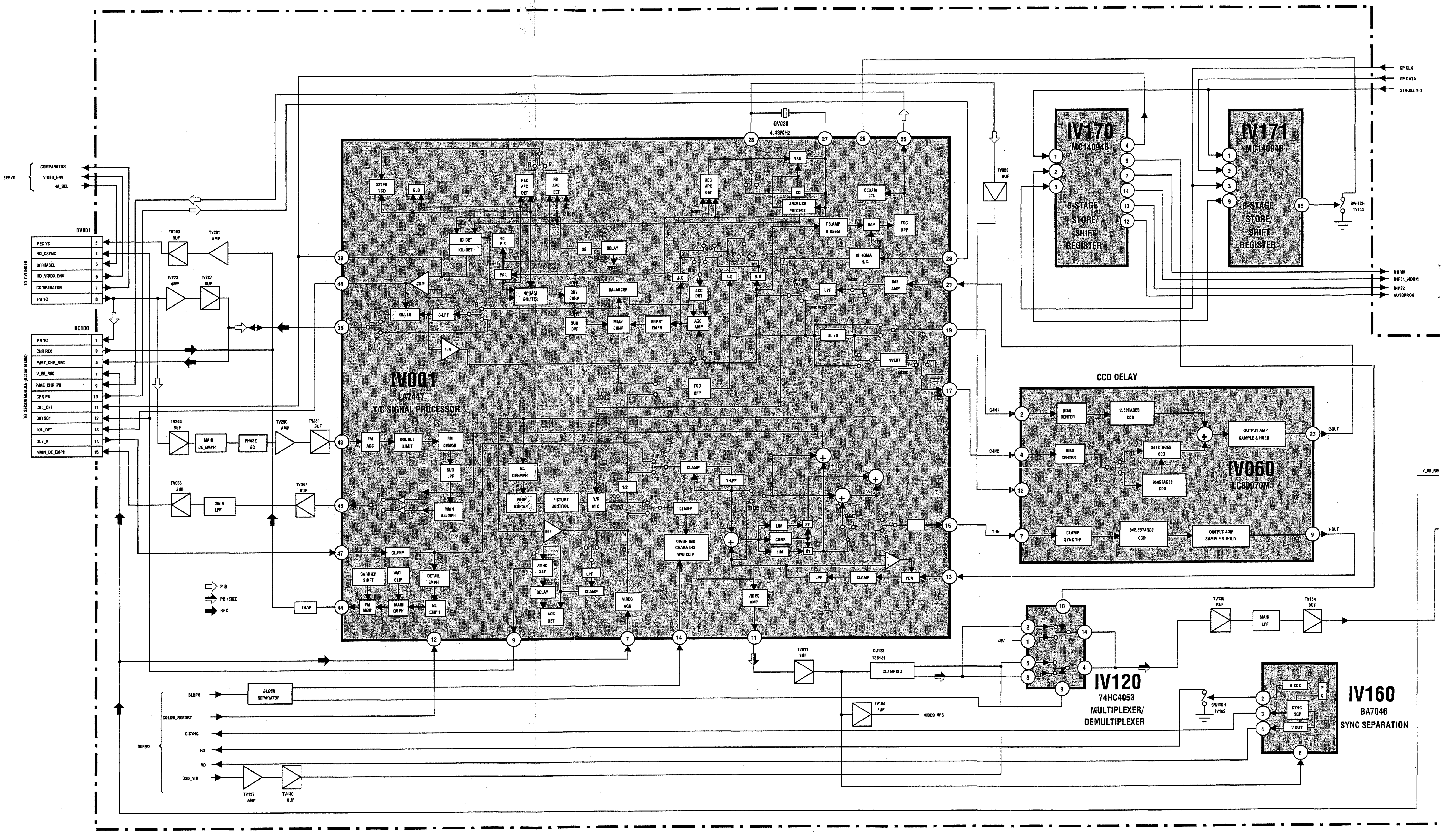
Component side -Côté composants - Bestückungsseite - Lato componenti - Lado componentes


LC108
PC103
PC104
IC100
CC141
FC133
LC135
LC134
LC123
LC129
CC122
CC131
TC135
RC141
BC100

Solder side -Côté cuivre - Lötseite - Lato saldature - Lado del cobre

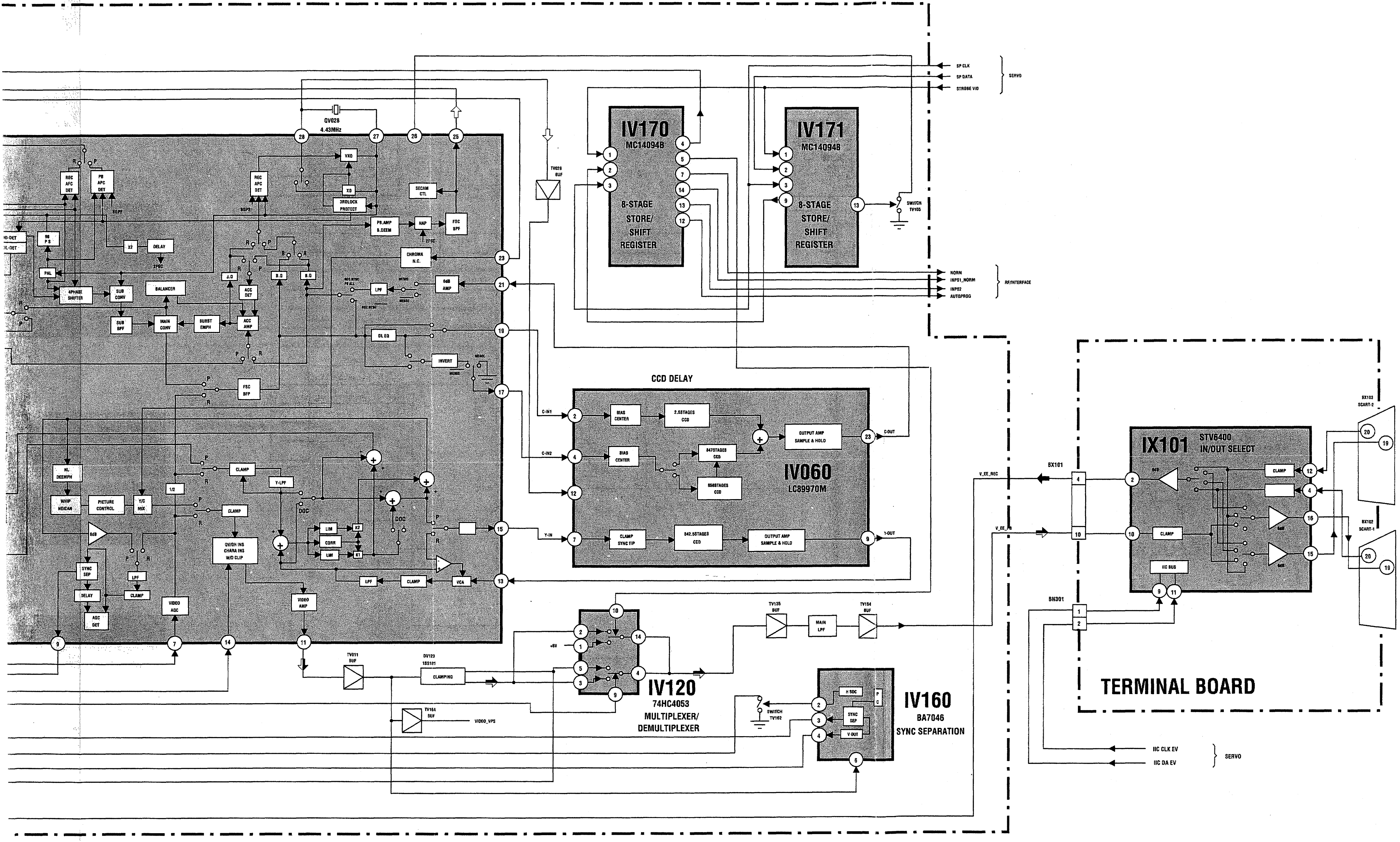

RC114
RC117
TC112
RC104
RC107
CC106
JC116
RC143
CC148
RC144
RC146
TC136
TC137
RC147
CC142
TC134
RC152
JC138
JC145
JC146
TC140
TC139
RC139
RC138
RC121
CC134
JC121
JC117
CC144

BLOCK DIAGRAM VIDEO SIGNAL PROCESSING - SCHEMA SYNOPTIQUE TRAITEMENT VIDEO - BLOCKSCHALTBILD VIDEO SIGNALVERARBEITUNG - SCHEMA A BLOCCHI ELABORAZIONE VIDEO - ESQUEMA DE BLOQUES TRATAMIENTO VIDEO


SERVO
COMPARATOR
VIDEO_ENV
HA_SEL
BV001
TO CYLINDER
REC YC 2
HD_CSYNC 4
DFFHASEL 5
HD_VIDEO_ENV 6
COMPARATOR 7
PB YC 8
BC100
TO SECAM MODULE (Not for all sets)
PB YC 1
CHR REC 3
P/ME_CHR_REC 4
V_EE_REC 7
P/ME_CHR_PB 9
CHR PB 10
COL_OFF 11
CSYNC1 12
KIL_DET 13
DLY_Y 14
MAIN_DE_EMPH 15
TV200 BUF
TV201 AMP
TV223 AMP
TV227 BUF
TV243 BUF
MAIN DE_EMPH
PHASE EQ
TV250 AMP
TV251 BUF
TV055 BUF
MAIN LPF
TV047 BUF
TRAP
PB
PB / REC
REC
IV001
LA7447
Y/C SIGNAL PROCESSOR
321FH VCO
SLD
REC AFC DET
PB APC DET
BGPY
ID-DET
KIL-DET
90 P S
PAL
COM
KILLER
C-LPF
6dB
4PHASE SHIFTER
SUB CONV
SUB BPF
X2
DELAY
2FSC
BALANCER
MAIN CONV
BURST EMPH
REC APC DET
BGP2
J.G
ACC DET
ACC AMP
B.G
FSC BFP
QV028
4.43MHz
VXO
XO
3RDLOCK PROTECT
SECAM CTL
PB.AMP B.DEEM
NAP
FSC BPF
CHROMA N.C.
6dB AMP
LPF
REC.NTSC PB ALL
MESEC
DL EQ
INVERT
FM AGC
DOUBLE LIMIT
FM DEMOD
SUB LPF
MAIN DEEMPH
NL DEEMPH
WHIP NOICAN
PICTURE CONTROL
Y/C MIX
1/2
CLAMP
Y-LPF
DOC
LIM
CORR
K2
X1
QV/QH INS CHARA INS W/D CLIP
SYNC SEP
DELAY
AGC DET
LPF
VIDEO AGC
VIDEO AMP
VCA
CARRIER SHIFT
W/D CLIP
DETAIL EMPH
FM MOD
MAIN EMPH
NL EMPH
P
R
A
B
39
40
38
43
46
47
44
12
9
7
14
11
28
27
26
25
23
21
19
17
15
13
TV028 BUF
IV170
MC14094B
8-STAGE STORE/ SHIFT REGISTER
IV171
MC14094B
8-STAGE STORE/ SHIFT REGISTER
SWITCH TV103
SP CLK
SP DATA
STROBE VID
NORM
INPS1_NORM
INPS2
AUTOPROG
CCD DELAY
C-IN1
C-IN2
Y-IN
BIAS CENTER
2.5STAGES CCD
847STAGES CCD
858STAGES CCD
CLAMP SYNC TIP
842.5STAGES CCD
OUTPUT AMP SAMPLE & HOLD
C-OUT
Y-OUT
IV060
LC89970M
V_EE_REC
TV011 BUF
DV123 1SS181
CLAMPING
TV154 BUF
VIDEO_VPS
+5V
IV120
74HC4053
MULTIPLEXER/ DEMULTIPLEXER
TV135 BUF
MAIN LPF
TV154 BUF
SWITCH TV162
H SDC
P C
SYNC SEP
V OUT
IV160
BA7046
SYNC SEPARATION
BLOCK SEPARATOR
BLKPV
COLOR_ROTARY
C SYNC
HD
VD
OSD_VID
TV127 AMP
TV130 BUF

UMINANCE / CHROMINANCE - VIDEO SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMIENTO VIDEO

EMA SYNOPTIQUE TRAITEMENT VIDEO - BLOCKSCHALTBILD VIDEO SIGNALVERARBEITUNG -
MA DE BLOQUES TRATAMIENTO VIDEO


QV028
4.43MHz
28
27
26
25
REC AFC DET
PB APC DET
REC APC DET
VXO
X0
3RDLOCK PROTECT
SECAM CTL
BGP2
PB.AMP B.DEEM
NAP
FSC BPF
2FSC
90 PS
X2
DELAY
PAL
CHROMA N.C.
4PHASE SHIFTER
SUB CONV
BALANCER
J.G
ACC DET
B.G
LPF
6dB AMP
SUB BPF
MAIN CONV
BURST EMPH
ACC AMP
DL EQ
INVERT
FSC BFP
NL DEEMPH
WHIP NOICAN
PICTURE CONTROL
Y/C MIX
1/2
CLAMP
Y-LPF
DOC
LIM
CORR
K1
K2
6dB
SYNC SEP
DELAY
AGC DET
VIDEO AGC
QV/DH INS CHARA INS W/D CLIP
VIDEO AMP
VCA
23
21
19
17
15
13
9
7
14
11
TV028 BUF
IV170
MC14094B
8-STAGE STORE/ SHIFT REGISTER
IV171
MC14094B
8-STAGE STORE/ SHIFT REGISTER
SWITCH TV103
SP CLK
SP DATA
STROBE VID
SERVO
NORM
INPS1_NORM
INPS2
AUTOPROG
RF/INTERFACE
CCD DELAY
C-IN1
C-IN2
Y-IN
BIAS CENTER
2.5STAGES CCD
847STAGES CCD
858STAGES CCD
OUTPUT AMP SAMPLE & HOLD
CLAMP SYNC TIP
842.5STAGES CCD
C-OUT
Y-OUT
IV060
LC89970M
TV011 BUF
DV123 1SS181
CLAMPING
+5V
IV120
74HC4053
MULTIPLEXER/ DEMULTIPLEXER
TV164 BUF
VIDEO_VPS
TV135 BUF
MAIN LPF
TV154 BUF
SWITCH TV162
H SDC
P C
SYNC SEP
V OUT
IV160
BA7046
SYNC SEPARATION
V_EE_REC
V_EE_PB
BX101
BN301
IX101
STV6400
IN/OUT SELECT
IIC BUS
BX103 SCART-2
BX102 SCART-1
TERMINAL BOARD
IIC CLK EV
IIC DA EV
SERVO

MEASUREMENTS VIDEO SIGNAL PROCESSING - MESURES TRAITEMENT VIDEO - MESSUNGEN VIDEO SIGNALVERARBEITUNG
MISURI ELABORAZIONE VIDEO - MEDIDAS TRATAMIENTO VIDEO

VIDEO		MODE		
LOC	PIN	EE	PLAY	REC.
DV123	1	3.1	3.1	3.1
	2	2.6	2.6	2.6
	3	2.6	2.6	2.6
IV001	1	2.3	4.5	2.3
	2	3.1	3.1	3.1
	3	2.5	2.5	2.5
	4	1.5	2	1.5
	5	2.4	2.4	2.4
	6	2.8	2.8	4.2
	7	3	3	3
	8	5	5	5
	9	0.5	0.5	0.5
	10	3.1	3.1	3.1
	11	2	2.1	2
	12	2.4	2.4	2.4
	13	2.2	2.2	2.2
	14	0.2	0.2	0.2
	15	1.2	1.2	1.2
	16	2.3	2.2	2.3
	17	2.5	2.5	2.5
	18	0	0	0
	19	2.6	2.6	2.6
	20	0	0	0
	21	2.5	2.5	2.5
	22	0	0	0
	23	1.9	1.9	1.9
	24	0	0	0
	25	0	2.5	0
	26	0.2	0.2	0.2
	27	4	4	4
	28	2.8	2.8	2.8
	29	2.1	2.1	2.1
	30	0	0	0
	31	0	0	0
	32	0	0	0
	33	5	5	5
	34	0.6	0.6	0.6
	35	0	0.3	0
	36	2.9	2.9	2.9
	37	2.9	2.9	2.9
	38	2.3	3.2	2.3
	39	3	3	3
	40	3.7	3.7	3.7
	41	1.5	2	1.6
	42	0	0	0
	43	2.3	3.2	2.3
	44	3	3.6	3
	45	4.2	4.2	4.2
	46	2.3	3.2	2.3
	47	3	3.2	3
	48	2.3	4.5	2.3

VIDEO		MODE		
LOC	PIN	EE	PLAY	REC.
IV060	1	0	0	0
	2	2.3	2.3	2.3
	3	5.1	5.1	5.1
	4	2.3	2.3	2.3
	5	0	0	0
	6	0	0	0
	7	2.3	2.3	2.3
	8	0	0	0
	9	1.2	1.2	1.2
	10	0	0	0
	11	2.3	2.3	2.3
	12	1.2	1.2	1.2
	13	0	0	0
	14	2	2	2
	15	2	2	2
	16	5	5	5
	17	0	0	0
	18	5	5	5
	19	8.5	8.5	8.5
	20	4.3	4.3	4.3
	21	0	0	0
	22	0	0	0
	23	1.3	1.3	1.3
	24	0	0	0
IV120	1	5.1	5.1	5.1
	2	3.1	3.1	3.1
	3	3.1	2.9	3.1
	4	3.1	2.9	3.1
	5	2.7	2.7	2.7
	6	0	0	0
	7	0	0	0
	8	0	0	0
	9	5.1	5.1	5.1
	10	0	0	0
	11	0	0	0
	12	3.1	2.9	3.1
	13	0.1	0.1	0.1
	14	3.1	2.9	3.1
	15	3.1	2.9	3.1
	16	5.1	5.1	5.1
IV160	1	2.1	2.1	2.1
	2	4.7	4.7	4.7
	3	0.8	0.8	0.8
	4	5	5	5
	5	0	0	0
	6	2.4	2.2	2.4
	7	5.1	5.1	5.1
	8	2.2	2.2	2.2

VIDEO		MODE		
LOC	PIN	EE	PLAY	REC.
IV170	1	4.8	4.8	4.8
	2	0	0	0
	3	4.8	4.8	4.8
	4	0	0	0
	5	0	0	0
	6	0	0	0
	7	0	0	0
	8	0	0	0
	9	0	0	0
	10	0	0	0
	11	0	0	0
	12	0	0	0
	13	0	0	0
	14	4.9	4.9	4.9
	15	5.1	5.1	5.1
	16	5.1	5.1	5.1
IV171	1	4.8	4.8	4.8
	2	0	0	0
	3	4.8	4.8	4.8
	4	0	0	0
	5	0	0	0
	6	0	5	0
	7	0	0	0
IV171	8	0	0	0
	9	0	0	0
	10	0	0	0
	11	0	0	0
	12	0	0	0
	13	4.9	4.9	4.9
	14	0	0	0
	15	5.1	5.1	5.1
	16	5.1	5.1	5.1
TV002	E	0	0	0
	B	0	5	0
	C	0	0	0
TV003	E	1.6	2.5	1.6
	B	0	3.2	0
	C	2.5	2.5	2.5
TV006	E	2.7	2.7	4.2
	B	0	0	4.8
	C	5.1	5.1	5.1
TV011	E	2.7	2.7	2.7
	B	2	2	2
	C	0	0	0

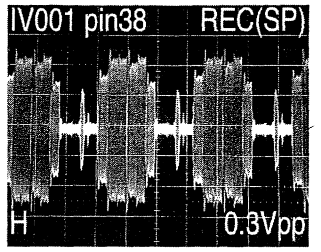
VIDEO		MODE		
LOC	PIN	EE	PLAY	REC.
TV028	E	2.2	2	2.2
	B	2.8	2.7	2.8
	C	5	5	5
TV047	E	3	3.8	3
	B	2.3	3.2	2.3
	C	0	0	0
TV055	E	2.3	3.2	2.3
	B	3	3.8	3
	C	5.1	5.1	5.1
TV103	E	0	0	0
	B	4.9	4.9	4.9
	C	0	0	0
TV126	E	0	0	0
	B	2.3	2.3	2.3
	C	-0.1	0	0
TV127	E	4.3	4.3	4.3
	B	3.7	3.7	3.7
	C	2.4	2.4	2.4
TV130	E	1.7	1.7	1.7
	B	2.4	2.4	2.4
	C	5.1	5.1	5.1
TV135	E	2.4	2.1	2.4
	B	3	2.7	3
	C	5.1	5.1	5.1
TV140	E	1.6	1.6	1.6
	B	1	1	1
	C	5	5	5
TV141	E	1.6	1.6	1.6
	B	2.3	2.3	2.3
	C	5.1	5.1	5.1
TV143	E	2.4	2.4	2.4
	B	1.8	1.8	1.8
	C	0	0	0
TV145	E	3.3	3.3	3.3
	B	2.4	2.4	2.4
	C	5.1	5.1	5.1
TV147	E	3.3	3.3	3.3
	B	4	4	4
	C	3.4	3.4	3.4

VIDEO		MODE		
LOC	PIN	EE	PLAY	REC.
TV149	E	3.4	3.4	3.4
	B	4	4	4
	C	0.2	0.2	0.2
TV154	E	1.8	1.6	1.8
	B	2.4	2.2	2.4
	C	5.1	5.1	5.1
TV164	E	0.2	0.2	0.2
	B	2.7	2.7	2.7
	C	0.2	0.2	0.2
TV170	E	0	0	0
	B	0	4.7	0
	C	5.1	0	5.1
TV171	E	5.1	5.1	5.1
	B	5.1	4.3	5.1
	C	0	5	0
TV186	E	0	0	0
	B	0	0	0
	C	0.3	0.3	0.3
TV187	E	0	0	0
	B	0.3	0.3	0.3
	C	0	1.2	1.2
TV188	E	1.9	1.9	4.1
	B	0	0	4.8
	C	5.1	5.1	5.1
TV200	E	2.7	4.4	2.7
	B	3.3	5	3.3
	C	5.1	5.1	5.1
TV201	E	1.2	4.3	1.2
	B	1.8	1.8	1.8
	C	3.3	5.1	3.3
TV223	E	0	1.1	0
	B	0	1.7	0
	C	0	3.6	0
TV225	E	0	0	0
	B	0	0	0
	C	0	0	0
TV227	E	0	3	0
	B	0	3.6	0
	C	0	5	0

VIDEO		MODE		
LOC	PIN	EE	PLAY	REC.
TV243	E	0	3.6	0
	B	0	2.9	0
	C	0	1.8	0
TV248	E	0	1.2	0
	B	0	1.8	0
	C	0	3.7	0
TV250	E	0	0.6	0
	B	0	1.2	0
	C	0	4.6	0
TV251	E	0	3.9	0
	B	0	4.5	0
	C	0	5	0

NOTES

MEASUREMENTS VIDEO SIGNAL PROCESSING - MESURES TRAITEMENT VIDEO - MESSUNGEN VIDEO SIGNALVERARBEITUNG
MISURI ELABORAZIONE VIDEO - MEDIDAS TRATAMIENTO VIDEO



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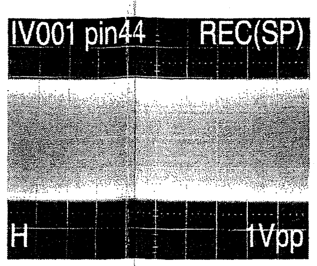

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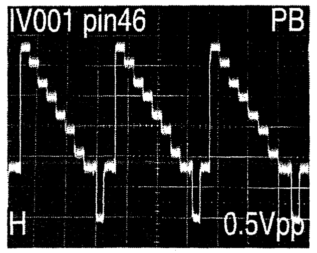

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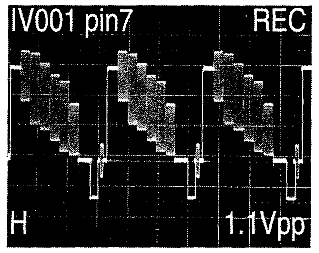

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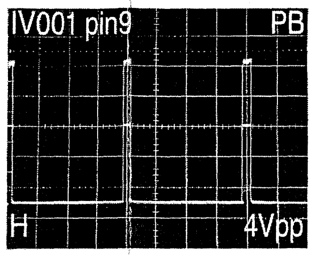

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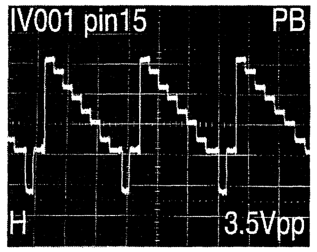

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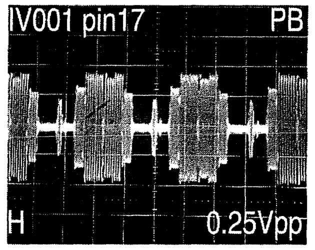

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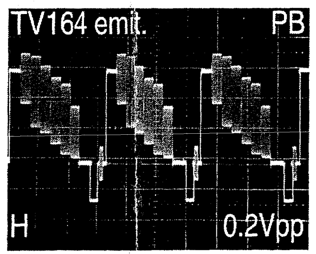

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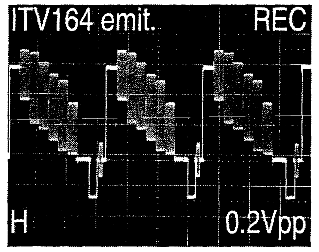
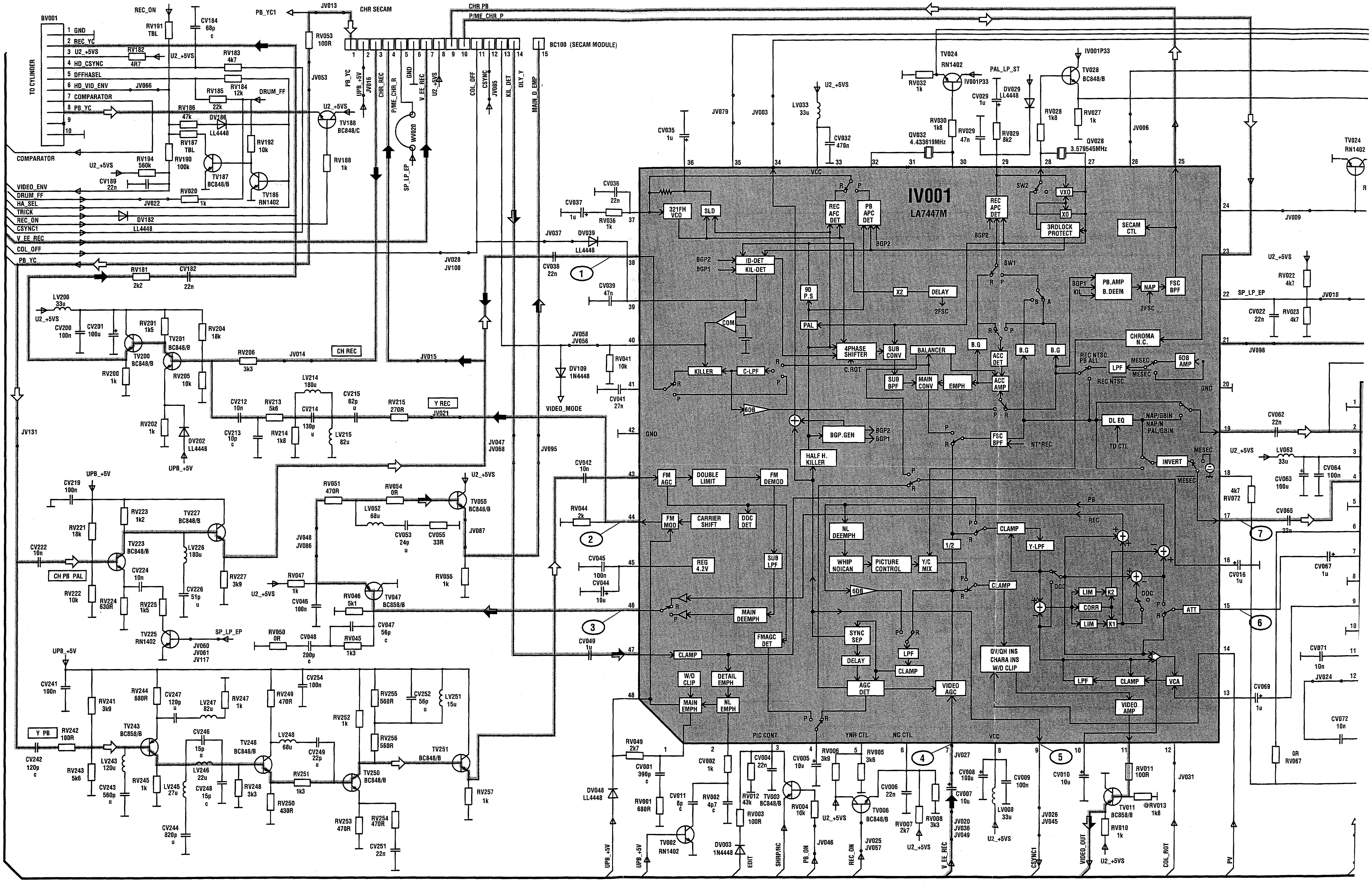


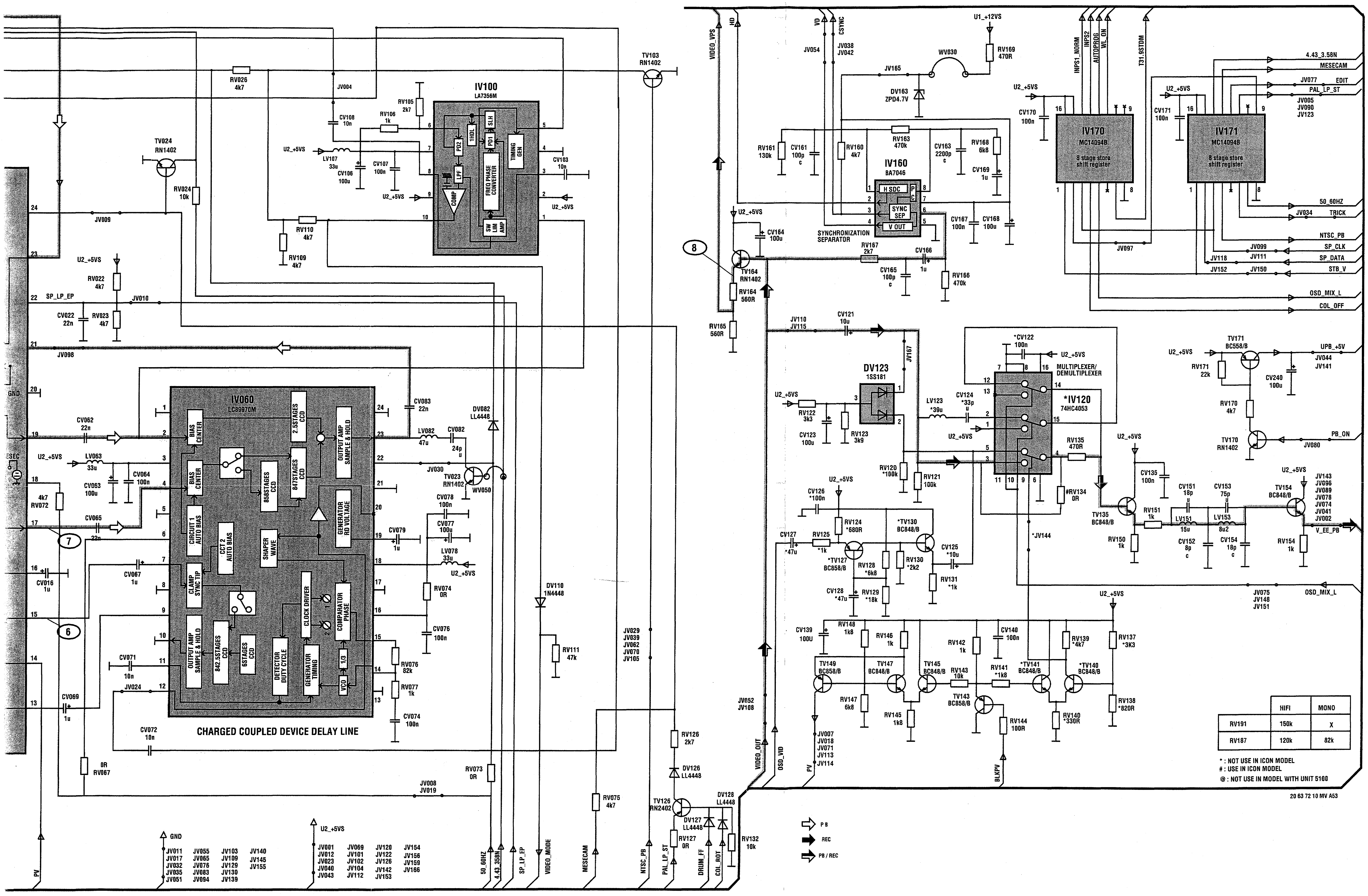
⑨

NOTES

VIDEO SIGNAL PROCESSING - TRAITEMENT LUMINANCE / CHROMINANCE - VIDEO SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMIENTO VIDEO

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA **(VPH 6790)**


IV001
LA7447M
BV001
TO CYLINDER
1 GND
2 REC_YC
3 U2_+5VS
4 HD_CSYNC
5 DFFHASEL
6 HD_VID_ENV
7 COMPARATOR
8 PB_YC
COMPARATOR
VIDEO_ENV
DRUM_FF
HA_SEL
TRICK
REC_ON
CSYNC1
V_EE_REC
COL_OFF
PB_YC
PB_YC1
CHR SECAM
CHR PB
P/ME_CHR_P
BC100 (SECAM MODULE)
CH REC
Y REC
CH PB PAL
Y PB
SP_LP_EP
VIDEO_MODE
321FH VCO
SLD
REC AFC DET
PB APC DET
REC APC DET
VXO
XO
3RDLOCK PROTECT
SECAM CTL
ID-DET
KIL-DET
90 P.S
PAL
X2
DELAY
2FSC
PB.AMP B.DEEM
NAP
FSC BPF
COM
KILLER
C-LPF
4PHASE SHIFTER
C.ROT
SUB CONV
BALANCER
SUB BPF
MAIN CONV
EMPH
ACC DET
ACC AMP
B.G
CHROMA N.C.
LPF
6DB AMP
REC NTSC
PB ALL
MESEC
6DB
BGP.GEN
BGP2
BGP1
FSC BPF
NT REC
DL EQ
NAP/GBIN
NAP/N
PAL/GBIN
TD CTL
INVERT
HALF H. KILLER
FM AGC
DOUBLE LIMIT
FM DEMOD
FM MOD
CARRIER SHIFT
DOC DET
NL DEEMPH
CLAMP
Y-LPF
1/2
REG 4.2V
SUB LPF
WHIP NOICAN
PICTURE CONTROL
Y/C MIX
LIM
K2
CORR
K1
DOC
ATT
MAIN DEEMPH
FMAGC DET
SYNC SEP
DELAY
LPF
W/D CLIP
DETAIL EMPH
AGC DET
VIDEO AGC
QV/QH INS CHARA INS W/D CLIP
VCA
VIDEO AMP
MAIN EMPH
NL EMPH
PIC CONT
YNR CTL
NC CTL
VCC
GND
UPB_+5V
EDIT
SHRP/RC
PB_ON
REC_ON
V_EE_REC
CSYNC1
VIDEO_OUT
COL_ROT
PV
U2_+5VS
①
②
③
④
⑤
⑥
⑦


IV100
LA7356M
IV060
LC89970M
CHARGED COUPLED DEVICE DELAY LINE
IV160
BA7046
SYNCHRONIZATION SEPARATOR
IV170
MC14094B
8 stage store shift register
IV171
MC14094B
8 stage store shift register
DV123
1SS181
*IV120
74HC4053
MULTIPLEXER/ DEMULTIPLEXER
TV103
RN1402
TV024
RN1402
TV023
RN1402
TV164
RN1402
TV126
RN2402
TV171
BC558/B
TV170
RN1402
TV135
BC848/B
TV154
BC848/B
U2_+5VS
U1_+12VS
VIDEO_VPS
HD
VD
CSYNC
INPS1_NORM
INPS2
AUTOPROG
WL_ON
T31.9STDM
4.43_3.58N
MESECAM
EDIT
PAL_LP_ST
50_60HZ
TRICK
NTSC_PB
SP_CLK
SP_DATA
STB_V
OSD_MIX_L
COL_OFF
UPB_+5V
PB_ON
V_EE_PB
SP_LP_EP
VIDEO_MODE
NTSC_PB
DRUM_FF
COL_ROT
VIDEO_OUT
OSD_VID
PV
BLKPV
GND
P B
REC
PB / REC
7
6
8

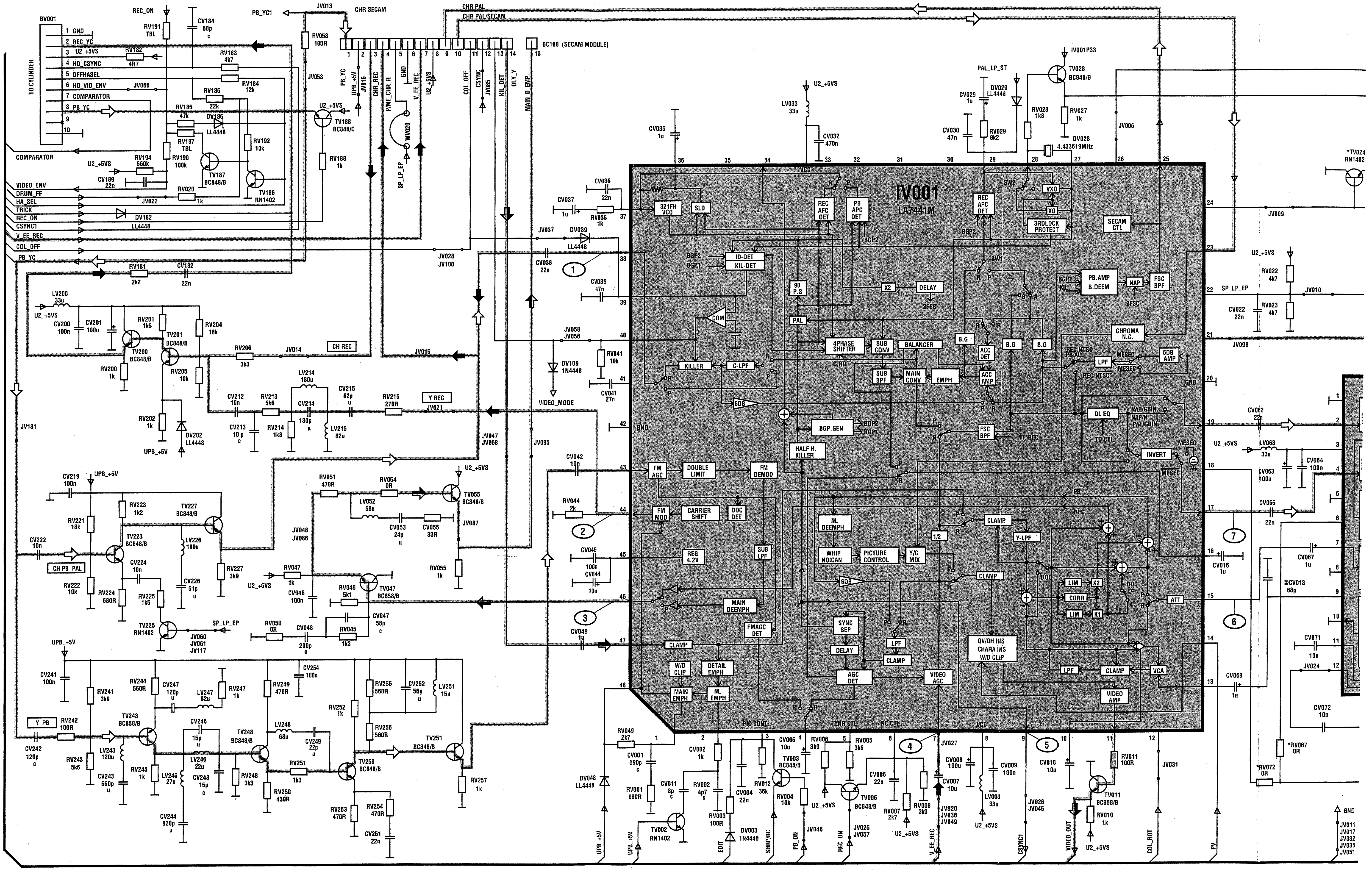
	HIFI	MONO
RV191	150k	X
RV187	120k	82k

* : NOT USE IN ICON MODEL
# : USE IN ICON MODEL
@ : NOT USE IN MODEL WITH UNIT 5100

20 63 72 10 MV A53

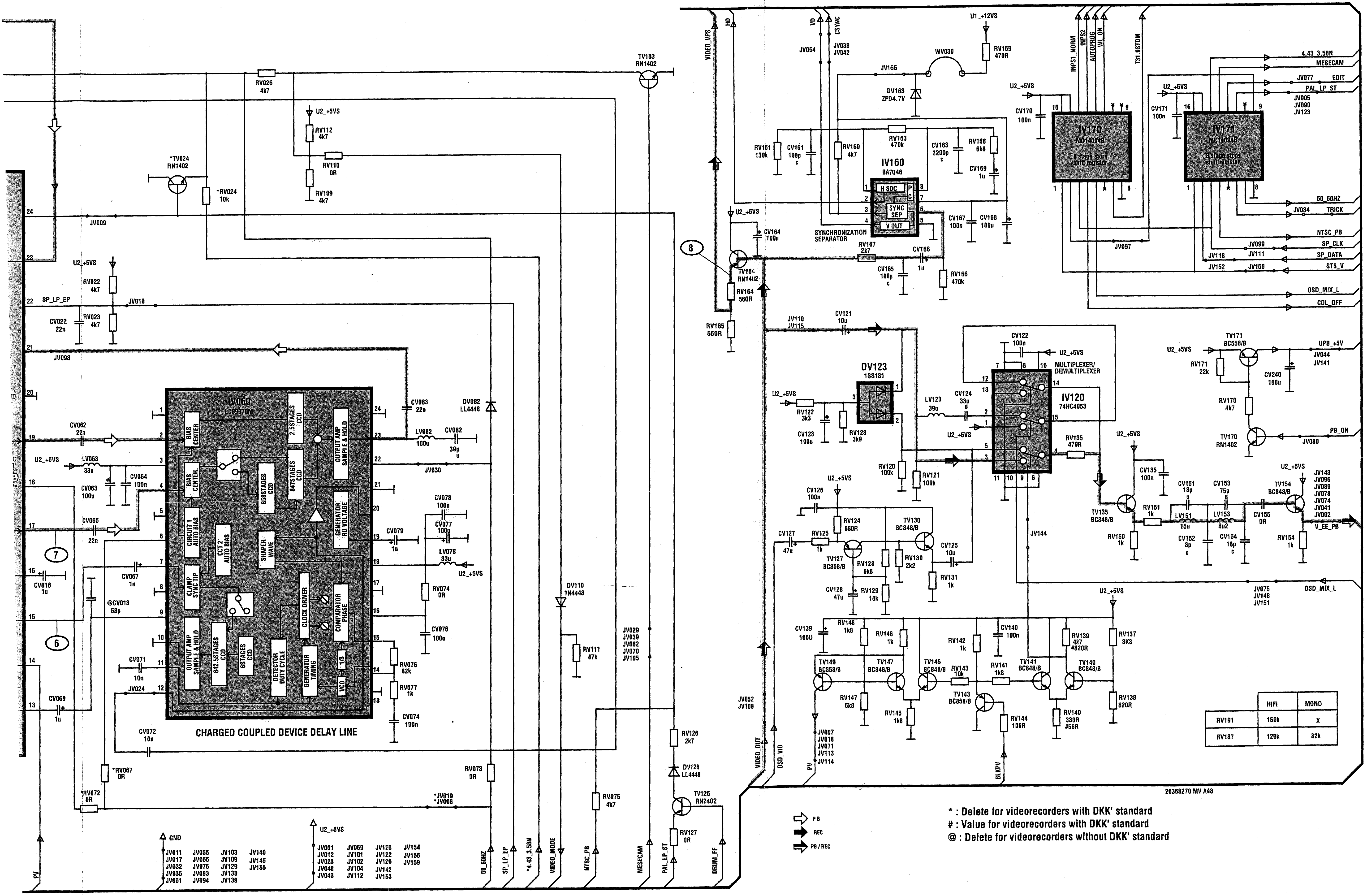
VIDEO SIGNAL PROCESSING - TRAITEMENT LUMINANCE / CHROMINANCE - VIDEO SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMIENTO VIDEO

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA (**M9571 HIFI - VR 6087/F - VR 8087 - VPH 6750**)



IV001
LA7441M
BV001
TO CYLINDER
1 GND
2 REC_YC
3 U2_+5VS
4 HD_CSYNC
5 DFFHASEL
6 HD_VID_ENV
7 COMPARATOR
8 PB_YC
COMPARATOR
VIDEO_ENV
DRUM_FF
HA_SEL
TRICK
REC_ON
CSYNC1
V_EE_REC
COL_OFF
PB_YC
REC_ON
PB_YC1
JV013
CHR SECAM
CHR PAL
CHR PAL/SECAM
BC100 (SECAM MODULE)
TV188 BC848/C
TV187 BC848/B
TV186 RN1402
TV201 BC848/B
TV200 BC848/B
TV227 BC848/B
TV223 BC848/B
TV225 RN1402
TV243 BC858/B
TV248 BC848/B
TV250 BC848/B
TV251 BC848/B
TV055 BC848/B
TV047 BC858/B
TV028 BC848/B
TV002 RN1402
TV003 BC848/B
TV006 BC848/B
TV011 BC858/B
CH REC
Y REC
CH PB PAL
Y PB
SP_LP_EP
VIDEO_MODE
PAL_LP_ST
QV028 4.433619MHz
321FH VCO
SLD
REC AFC DET
PB AFC DET
REC APC DET
VXO
XO
3RDLOCK PROTECT
SECAM CTL
ID-DET
KIL-DET
X2
DELAY
2FSC
PB.AMP B.DEEM
NAP
FSC BPF
90 P.S
COM
PAL
4PHASE SHIFTER
SUB CONV
BALANCER
B.G
ACC DET
CHROMA N.C.
KILLER
C-LPF
SUB BPF
MAIN CONV
EMPH
ACC AMP
LPF
6DB AMP
6DB
BGP.GEN
FSC BPF
DL EQ
HALF H. KILLER
INVERT
FM AGC
DOUBLE LIMIT
FM DEMOD
FM MOD
CARRIER SHIFT
DOC DET
NL DEEMPH
CLAMP
Y-LPF
REG 4.2V
SUB LPF
WHIP NOICAN
PICTURE CONTROL
Y/C MIX
LIM
K2
CORR
K1
ATT
MAIN DEEMPH
FMAGC DET
SYNC SEP
DELAY
QV/QH INS CHARA INS W/D CLIP
VCA
W/D CLIP
DETAIL EMPH
AGC DET
VIDEO AGC
VIDEO AMP
MAIN EMPH
NL EMPH
PIC CONT
YNR CTL
NC CTL
VCC
GND
UPB_+5V
EDIT
SHRP/RC
PB_ON
REC_ON
V_EE_REC
CSYNC1
VIDEO_OUT
COL_ROT
PV
U2_+5VS
① ② ③ ④ ⑤ ⑥ ⑦

ENTO VIDEO


IV060
LC89970M
CHARGED COUPLED DEVICE DELAY LINE
BIAS CENTER
2.5STAGES CCD
847STAGES CCD
858STAGES CCD
OUTPUT AMP SAMPLE & HOLD
GENERATOR RD VOLTAGE
CIRCUIT 1 AUTO BIAS
CCT 2 AUTO BIAS
WAVE SHAPER
CLAMP SYNC TIP
CLOCK DRIVER
COMPARATOR PHASE
842.5STAGES CCD
6STAGES CCD
DETECTOR DUTY CYCLE
GENERATOR TIMING
VCO
1/3
IV160
BA7046
H SDC
SYNC SEP
V OUT
SYNCHRONIZATION SEPARATOR
IV170
MC14094B
8 stage store shift register
IV171
MC14094B
8 stage store shift register
DV123
1SS181
IV120
74HC4053
MULTIPLEXER/ DEMULTIPLEXER
VIDEO_VPS
HD
VD
CSYNC
U1_+12VS
U2_+5VS
INPS1_NORM
INPS2
AUTOPROG
WL_ON
T31_9STDM
4.43_3.58N
MESECAM
EDIT
PAL_LP_ST
50_60HZ
TRICK
NTSC_PB
SP_CLK
SP_DATA
STB_V
OSD_MIX_L
COL_OFF
UPB_+5V
PB_ON
V_EE_PB
SP_LP_EP
VIDEO_OUT
OSD_VID
BLKPV
PV
GND
50_60HZ
*4.43_3.58N
VIDEO_MODE
NTSC_PB
MESECAM
PAL_LP_ST
DRUM_FF
PB
REC
PB / REC
20368270 MV A48

	HIFI	MONO
RV191	150k	X
RV187	120k	82k

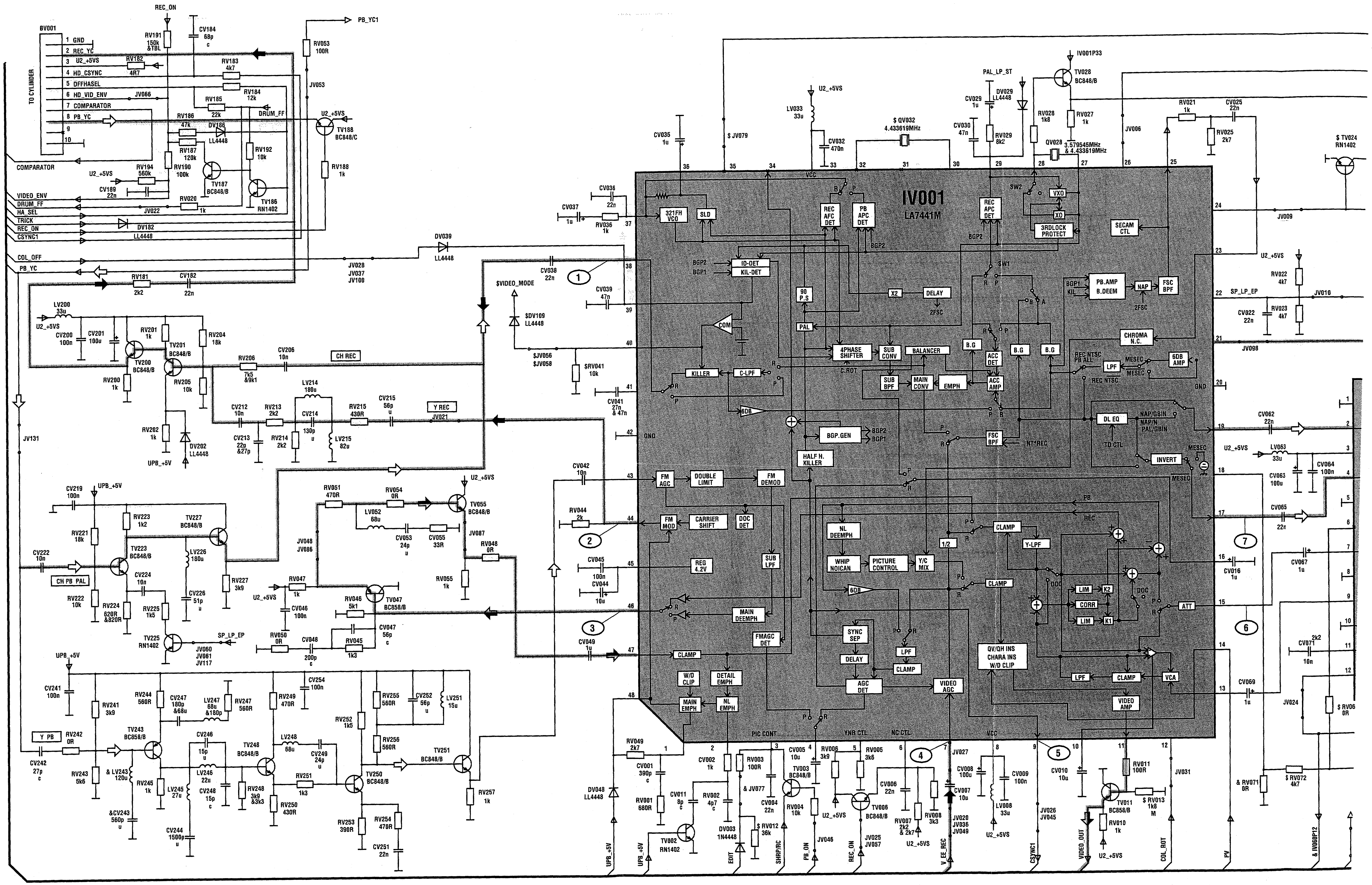
* : Delete for videorecorders with DKK' standard

: Value for videorecorders with DKK' standard

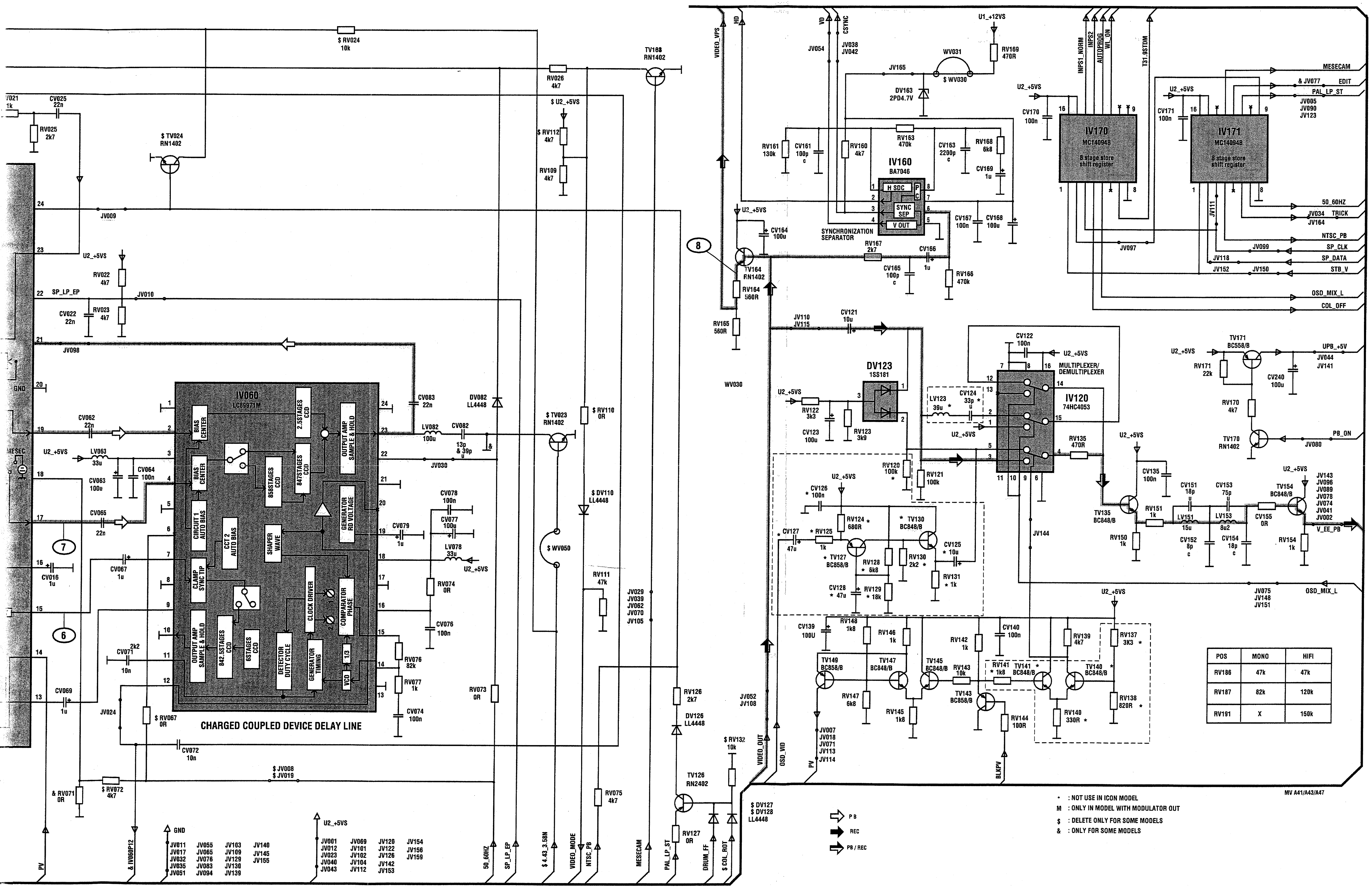
@ : Delete for videorecorders without DKK' standard

VIDEO SIGNAL PROCESSING - TRAITEMENT LUMINANCE / CHROMINANCE - VIDEO SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMIENTO VIDEO

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA **(VR 6081 - VR 7081 - VR 8083SH -V 3450 SV - VPH 66001 - VPH 6697 SENSAR - VPH 6751 - M 9560 HIFI/SA - T 8**


IV001
LA7441M
BV001
TO CYLINDER
1 GND
2 REC_YC
3 U2_+5VS
4 HD_CSYNC
5 DFFHASEL
6 HD_VID_ENV
7 COMPARATOR
8 PB_YC
REC_ON
PB_YC1
COMPARATOR
VIDEO_ENV
DRUM_FF
HA_SEL
TRICK
REC_ON
CSYNC1
COL_OFF
PB_YC
U2_+5VS
UPB_+5V
CH REC
Y REC
CH PB PAL
Y PB
SP_LP_EP
$VIDEO_MODE
321FH VCO
SLD
REC AFC DET
PB APC DET
REC APC DET
VXO
XO
3RDLOCK PROTECT
SECAM CTL
ID-DET
KIL-DET
90 P.S
X2
DELAY
2FSC
PB.AMP B.DEEM
NAP
FSC BPF
COM
PAL
4PHASE SHIFTER
SUB CONV
BALANCER
B.G
ACC DET
ACC AMP
CHROMA N.C.
6DB AMP
LPF
KILLER
C-LPF
SUB BPF
MAIN CONV
EMPH
6DB
BGP.GEN
FSC BPF
DL EQ
HALF H. KILLER
INVERT
FM AGC
DOUBLE LIMIT
FM DEMOD
FM MOD
CARRIER SHIFT
DOC DET
NL DEEMPH
CLAMP
Y-LPF
WHIP NOICAN
PICTURE CONTROL
Y/C MIX
1/2
SUB LPF
REG 4.2V
MAIN DEEMPH
LIM
K2
CORR
K1
ATT
FMAGC DET
SYNC SEP
LPF
QV/QH INS CHARA INS W/D CLIP
VCA
W/D CLIP
DETAIL EMPH
DELAY
AGC DET
VIDEO AGC
VIDEO AMP
MAIN EMPH
NL EMPH
PIC CONT
YNR CTL
NC CTL
VCC
GND
QV032 4.433619MHz
QV028 3.579545MHz & 4.433619MHz
PAL_LP_ST
IV001P33
TV028 BC848/B
TV188 BC848/C
TV187 BC848/B
TV186 RN1402
TV200 BC848/B
TV201 BC848/B
TV227 BC848/B
TV223 BC848/B
TV225 RN1402
TV055 BC848/B
TV047 BC858/B
TV243 BC858/B
TV248 BC848/B
TV250 BC848/B
TV251 BC848/B
TV002 RN1402
TV003 BC848/B
TV006 BC848/B
TV011 BC858/B
$ TV024 RN1402
UPB_+5V
EDIT
SHRP/RC
PB_ON
REC_ON
V_EE_REC
CSYNC1
VIDEO_OUT
COL_ROT
PV
& IV060P12
U2_+5VS
① ② ③ ④ ⑤ ⑥ ⑦

Updated 09 / 97

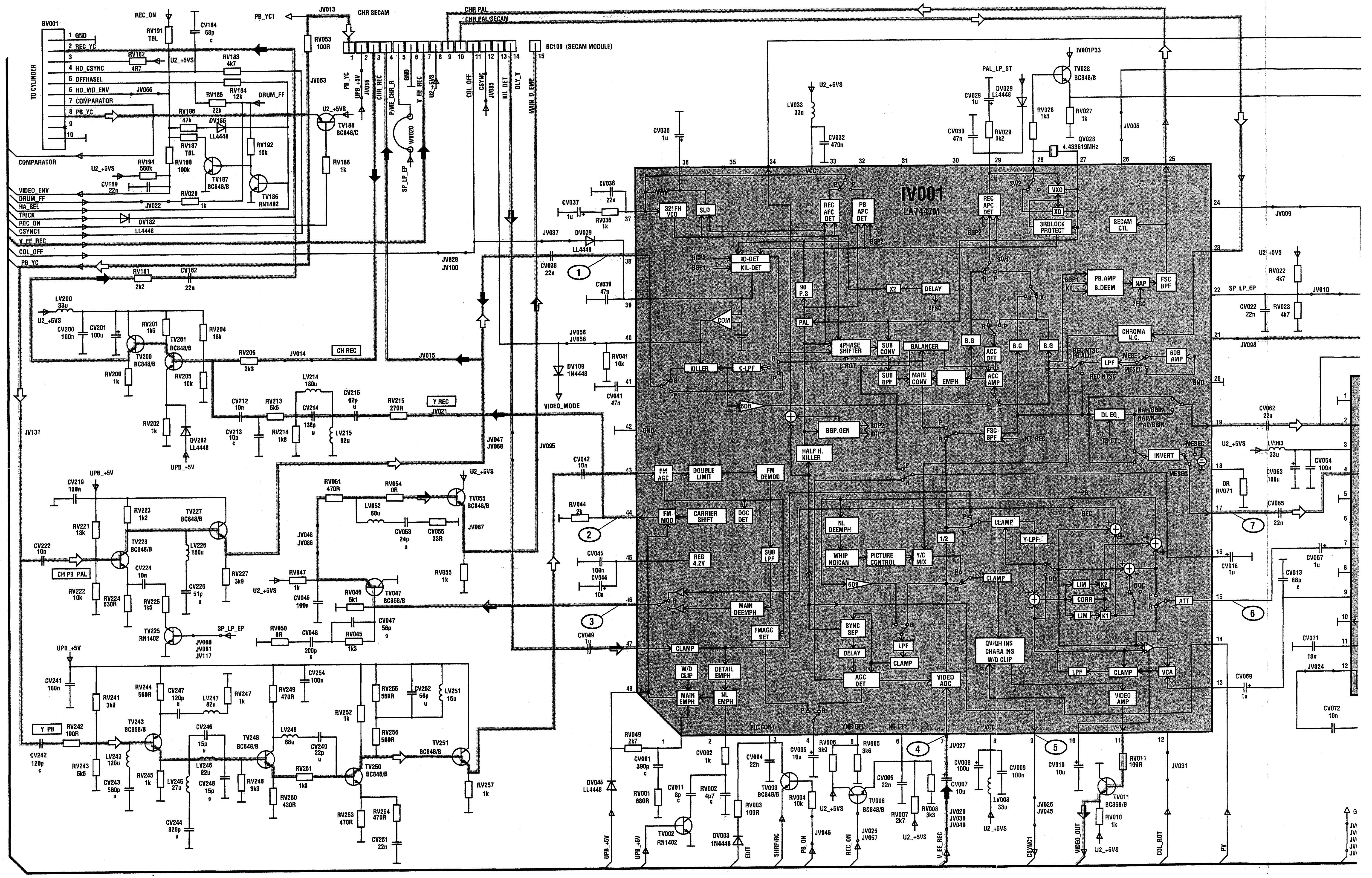

IV060
LC89971M
CHARGED COUPLED DEVICE DELAY LINE
BIAS CENTER
CIRCUIT 1 AUTO BIAS
CCT 2 AUTO BIAS
CLAMP SYNC TIP
OUTPUT AMP SAMPLE & HOLD
842.5STAGES CCD
6STAGES CCD
858STAGES CCD
847STAGES CCD
2.5STAGES CCD
SHAPER WAVE
GENERATOR RD VOLTAGE
CLOCK DRIVER
COMPARATOR PHASE
DETECTOR DUTY CYCLE
GENERATOR TIMING
VCO
IV160
BA7046
H SDC
SYNC SEP
V OUT
SYNCHRONIZATION SEPARATOR
IV170
MC14094B
8 stage store shift register
IV171
MC14094B
8 stage store shift register
IV120
74HC4053
MULTIPLEXER/ DEMULTIPLEXER
DV123
1SS181
TV024
RN1402
TV168
RN1402
TV023
RN1402
TV164
RN1402
TV126
RN2402
TV130
BC848/B
TV127
BC858/B
TV135
BC848/B
TV154
BC848/B
TV170
RN1402
TV171
BC558/B
TV149
BC858/B
TV147
BC848/B
TV145
BC848/B
TV143
BC858/B
TV141
BC848/B
TV140
BC848/B
VIDEO_VPS
HD
VD
CSYNC
U1_+12VS
U2_+5VS
INPS1_NORM
INPS2
AUTOPROG
WL_ON
T31.9STDM
MESECAM
EDIT
PAL_LP_ST
50_60HZ
TRICK
NTSC_PB
SP_CLK
SP_DATA
STB_V
OSD_MIX_L
COL_OFF
UPB_+5V
PB_ON
V_EE_PB
SP_LP_EP
VIDEO_OUT
OSD_VID
PV
BLKPV
GND
& IV060P12
50_60HZ
SP_LP_EP
$ 4.43_3.58N
VIDEO_MODE
NTSC_PB
MESECAM
PAL_LP_ST
DRUM_FF
$ COL_ROT
PB
REC
PB / REC
MV A41/A43/A47

POS	MONO	HIFI
RV186	47k	47k
RV187	82k	120k
RV191	X	150k

* : NOT USE IN ICON MODEL
M : ONLY IN MODEL WITH MODULATOR OUT
$: DELETE ONLY FOR SOME MODELS
& : ONLY FOR SOME MODELS

VIDEO SIGNAL PROCESSING - TRAITEMENT LUMINANCE / CHROMINANCE - VIDEO SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMIENTO VIDEO

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA (**VPH 6600N - VPH 6680 - VPH 6780 - M 9680 HIFI**)



IV001
LA7447M
BV001
TO CYLINDER
1 GND
2 REC_YC
3
4 HD_CSYNC
5 DFFHASEL
6 HD_VID_ENV
7 COMPARATOR
8 PB_YC
9
10
COMPARATOR
VIDEO_ENV
DRUM_FF
HA_SEL
TRICK
REC_ON
CSYNC1
V_EE_REC
COL_OFF
PB_YC
REC_ON
PB_YC1
JV013
CHR SECAM
CHR PAL
CHR PAL/SECAM
BC100 (SECAM MODULE)
PB_YC
UPB_+5V
JV016
CHR_REC
P/ME_CHR_R
GND
V_EE_REC
U2_+5VS
COL_OFF
CSYNC
JV085
KIL_DET
DLY_Y
MAIN_D_EMP
TV188
BC848/C
TV187
BC848/B
TV186
RN1402
TV200
BC848/B
TV201
BC848/B
CH REC
Y REC
JV014
JV015
JV021
CH PB PAL
TV223
BC848/B
TV227
BC848/B
TV225
RN1402
SP_LP_EP
TV055
BC848/B
TV047
BC858/B
Y PB
TV243
BC858/B
TV248
BC848/B
TV250
BC848/B
TV251
BC848/B
321FH VCO
SLD
REC AFC DET
PB APC DET
REC APC DET
VXO
XO
3RDLOCK PROTECT
SECAM CTL
ID-DET
KIL-DET
90 P.S
X2
DELAY
2FSC
PB.AMP B.DEEM
NAP
FSC BPF
COM
PAL
4PHASE SHIFTER
SUB CONV
BALANCER
B.G
ACC DET
CHROMA N.C.
KILLER
C-LPF
SUB BPF
MAIN CONV
EMPH
ACC AMP
LPF
6DB AMP
6DB
BGP.GEN
FSC BPF
DL EQ
NAP/GBIN
NAP/N
PAL/GBIN
INVERT
HALF H. KILLER
FM AGC
DOUBLE LIMIT
FM DEMOD
FM MOD
CARRIER SHIFT
DOC DET
NL DEEMPH
CLAMP
Y-LPF
1/2
REG 4.2V
SUB LPF
WHIP NOICAN
PICTURE CONTROL
Y/C MIX
LIM
K2
CORR
K1
DOC
ATT
MAIN DEEMPH
FMAGC DET
SYNC SEP
DELAY
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QV/QH INS CHARA INS W/D CLIP
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CSYNC1
VIDEO_OUT
COL_ROT
PV
U2_+5VS
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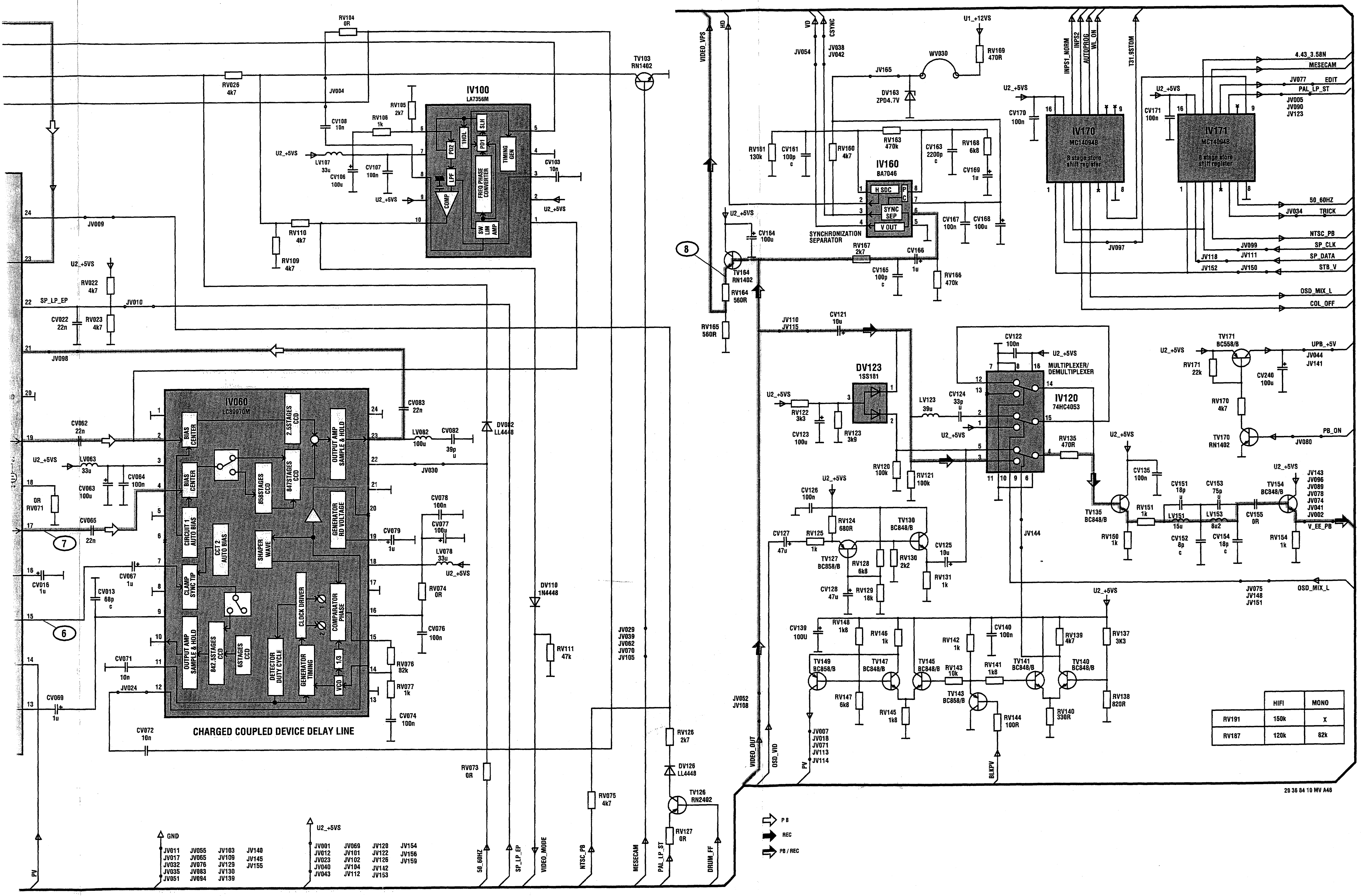
ENTO VIDEO


IV100
LA7356M
IV060
LC89970M
CHARGED COUPLED DEVICE DELAY LINE
BIAS CENTER
CIRCUIT 1 AUTO BIAS
CCT 2 AUTO BIAS
CLAMP SYNC TIP
OUTPUT AMP SAMPLE & HOLD
842.5STAGES CCD
6STAGES CCD
858STAGES CCD
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SHAPER WAVE
DETECTOR DUTY CYCLE
GENERATOR TIMING
CLOCK DRIVER
COMPARATOR PHASE
COMPARATOR RD VOLTAGE
GENERATOR RD VOLTAGE
VCO
1/3
FREQ PHASE CONVERTER
TIMING GEN
SW LIM AMP
COMP
LPF
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PD2
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TV143
BC858/B
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BC848/B
TV140
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TV126
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DV082
LL4448
DV126
LL4448
DV163
ZPD4.7V
WV030
VIDEO_VPS
HD
VD
CSYNC
U1_+12VS
U2_+5VS
INPS1_NORM
INPS2
AUTOPROG
WL_ON
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OSD_MIX_L
COL_OFF
UPB_+5V
PB_ON
V_EE_PB
VIDEO_OUT
OSD_VID
PV
BLKPV
SP_LP_EP
50_60HZ
SP_LP_EP
VIDEO_MODE
NTSC_PB
MESECAM
PAL_LP_ST
DRUM_FF
GND
U2_+5VS
PB
REC
PB / REC
20 36 84 10 MV A46

	HIFI	MONO
RV191	150k	X
RV187	120k	82k

V12284

THOMSON CONSUMER ELECTRONICS

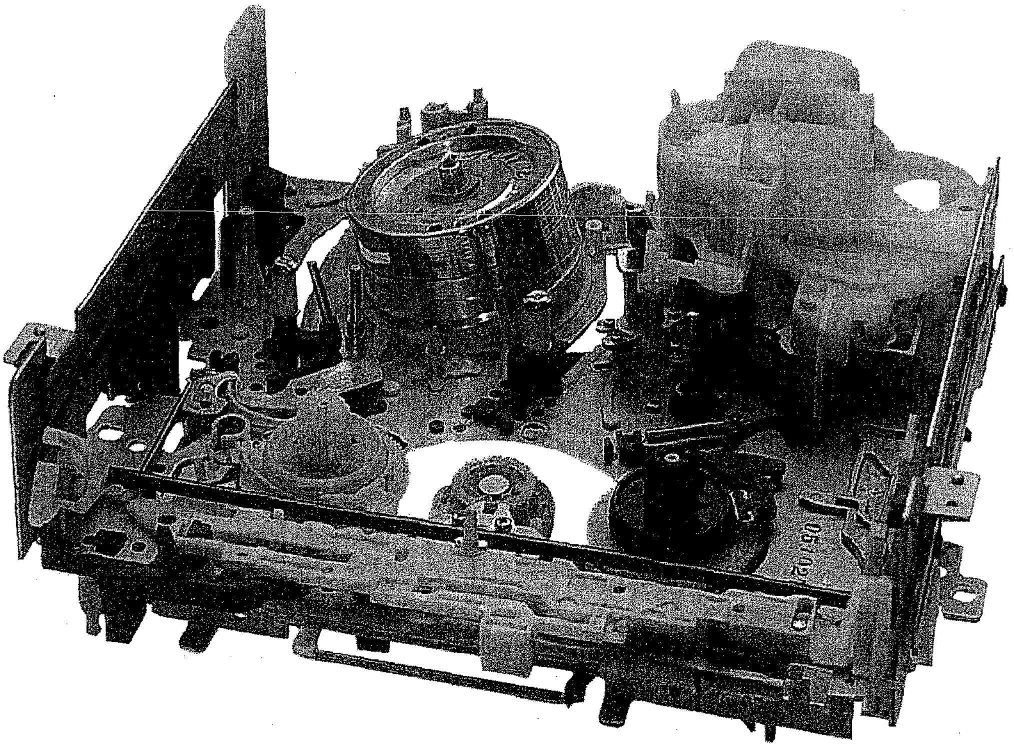
NORDMENDE THOMSON TECHNOLOGY **SABA** **TELEFUNKEN** **THOMSON**

VIDEO

SERVICE MANUAL
DOCUMENTATION TECHNIQUE
TECHNISCHE DOKUMENTATION
DOCUMENTAZIONE TECNICA
DOCUMENTACION TECNICA

R4000

Mechanical adjustment - Disassembly/Assembly
Instruction de réglages mécaniques - Démontage/Remontage
Mechanische Einstellungen - Demontage/Montage
Istruzioni per la manutenzione meccanica - Smontaggio/Rimontaggio
Ajustes mecanicos - Desmontar/Volver a montar



⚠

WARNING : *Before servicing this chassis read the safety recommendations.*
ATTENTION : *Avant toute intervention sur ce châssis, lire les recommandations de sécurité.*
ACHTUNG : *Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.*
ATTENZIONE : *Prima di intervenire sullo chassis, leggere le norme di sicurezza.*
IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

Code : 102.859.90 - 1094

Geräteliste auf Seite 2 / List of sets on page 2

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Deutschland

MODELLE	*MARKE*	*KOEPFE*	*TYPE*	*KATEGORIE*
V 1140 IMC	NORDMENDE	2	PAL(MESECAM)	1
V 1242 SV		2 (LP)	PAL(MESECAM)	1
V 1440 IMC		4 (LP)	PAL(MESECAM)	1
V 1444 SV		4 (LP)	PAL(MESECAM)	1
V 3445 SV		4 + 2 (LP)	PAL(MESECAM)	2
V 4404 SENSAR		4 + 2 (LP)	PAL / NTSC	2
V 4445 SV		4 + 2 + 1 (LP)	PAL / NTSC	2
VR 5020	SABA	2	PAL(MESECAM)	1
VR 5021		2		1
VR 5025		2		1
VR 5035		3		1
VR 5040		4		1
VR 5045		4		1
M 9415	TELEFUNKEN	2	PAL(MESECAM)	1
M 9420		2	PAL(MESECAM)	1
M 9423		2	PAL(MESECAM)	1
M 9425		2 (LP)	PAL(MESECAM)	1
M 9430		3	PAL(MESECAM)	1
M 9443		4	PAL(MESECAM)/SECAM	1
M 9445		4 (LP)	PAL(MESECAM)	1
M 9460		4 + 2 (LP)	PAL(MESECAM)	2
M 9470		4 + 2 (LP)	PAL(MESECAM)/SECAM	2

Export

MODELLE	*MARKE*	*KOEPFE*	*TYPE*	*KATEGORIE*
V 1140 IMC	NORDMENDE	2	PAL(MESECAM)	1
V 1242 SV		2 (LP)	PAL(MESECAM)	1
V 1440 IMC		4 (LP)	PAL(MESECAM)	1
V 1444 SV		4 (LP)	PAL(MESECAM)	1
V 3445 SV		4 + 2 (LP)	PAL(MESECAM)	2
V 4445 SV		4 + 2 + 1 (LP)	PAL / NTSC	2
VR 5020	SABA	2	PAL(MESECAM)	1
VR 5025		2	PAL(MESECAM)	1
VR 5035		3	PAL(MESECAM)	1
VR 5040		4	PAL(MESECAM)	1
M 9420	TELEFUNKEN	2	PAL(MESECAM)	1
M 9425		2 (LP)	PAL(MESECAM)	1
M 9430		3	PAL(MESECAM)	1
M 9443		4	PAL(MESECAM)/SECAM	1
M 9445		4 (LP)	PAL(MESECAM)	1
M 9460		4 + 2 (LP)	PAL(MESECAM)	2
M 9470		4 + 2 (LP)	PAL(MESECAM)/SECAM	2
V 1400	THOMSON	2	PAL(MESECAM)/SECAM	1
VP 2400		2	PAL(MESECAM)/SECAM	1
VP 4480		4 (LP)	PAL(MESECAM)/SECAM	1
VPH 6400		4 + 2	PAL(MESECAM)/SECAM	2
VPH 6480		4 + 2 (LP)	PAL(MESECAM)/SECAM	2
VPH 6490		4 + 2	PAL / SECAM / NTSC	2

INHALT
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I - ALLGEMEINES

Dieses Laufwerk entspricht dem VHS-Standard und wird mit 3 Motoren betrieben:
Kopftrommel-, Capstan- (Direktantrieb) und Funktionssteuermotor (zum Antrieb der Wickelteller und der Funktionssteuernocke). Das neue Laufwerk zeichnet sich durch einen Kopftrommelmotor aus, dessen Stator auf der Hauptplatine integriert ist.

II - BESCHREIBUNG DES LAUFWERKS

Liste der wichtigsten Teile:

Abb. 1:
1 - Andruckrolle
2 - Bandführung
6 - Ton- / Kontrollkopf
10 - Trommelantriebseinheit
11 - Löschkopf
13 - Antistatikbürste
Abb. 2:
15 - Bewegliche Bandführung
20 - Funktionsteuermotor
22 - Steuernocke
28 - Antriebsrollenachse
29 - Wickelteller-Antriebsriemen
33 - Zwischenrolleneinheit
42 - Aufnahmesperre
43 - Abwickelteller
44 - Aufwickelteller
47 - Bandzugarm

I - GENERAL

This mechanism complies fully with the VHS standard. It comprises of three motors; drum and capstan, which are both direct drive and a function control driving the function cam mechanism. This mechanism can be identified by the construction of the drum motor, the stator winding are attached to the main board.

II - INTRODUCTION TO THE MECHANISM

List of the main parts :

Fig. 1 :
1 - Pinch roller assembly
2 - Tape guide
6 - Audio / CTL Head
10 - Drum motor assembly
11 - Full Erase head
13 - Anti-static brush
Fig. 2 :
15 - Mobile tape guide
20 - Function control motor
22 - Drive cam
28 - Capstan motor
29 - Reel drive belt
33 - Intermediate pulley
42 - Recording safety lock
43 - Supply reel hub
44 - Take-up reel hub
47 - Tape back tension arm

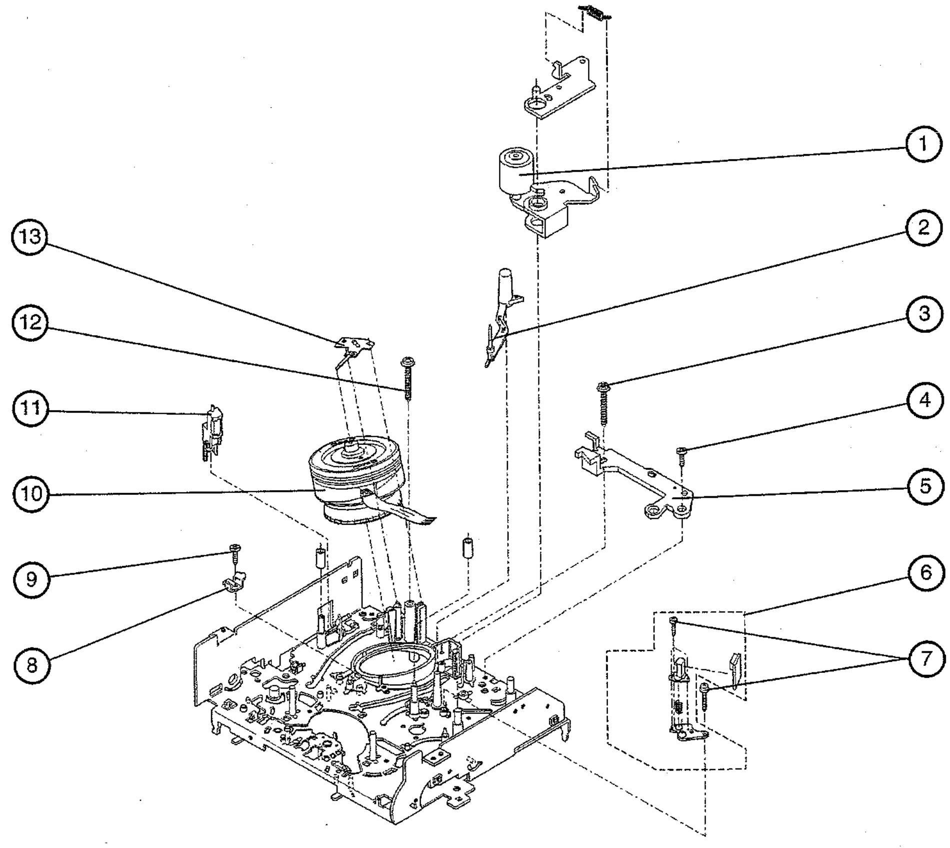


fig. 1

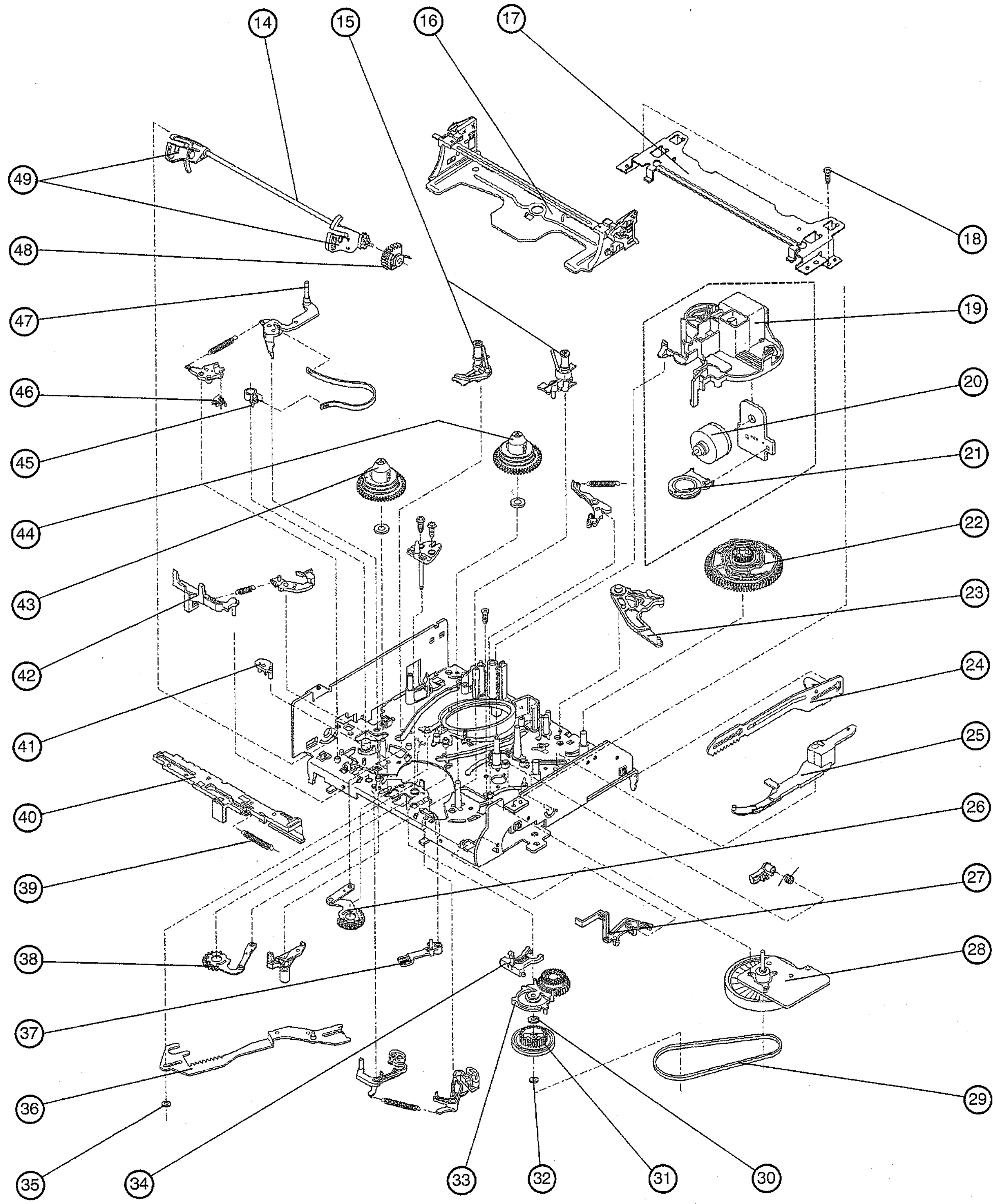


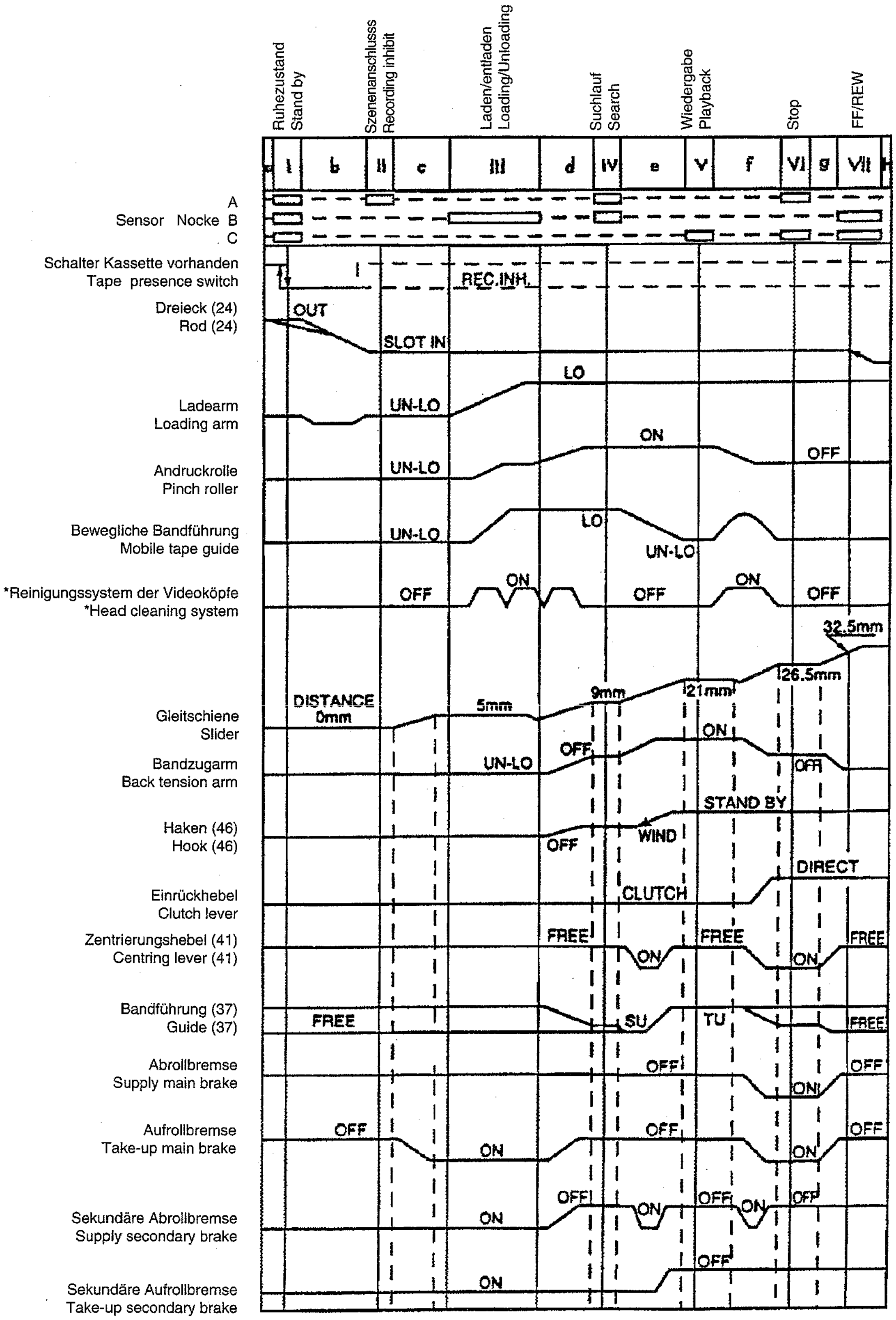
fig. 2

III - FUNKTIONSBESCHREIBUNG

1 - KONTROLLE DER FUNKTIONSABLÄUFE

III - DESCRIPTION OF THE OPERATION

1 - CHECKING FUNCTION SEQUENCE


Ruhezustand
Stand by
Szenenanschlusss
Recording inhibit
Laden/entladen
Loading/Unloading
Suchlauf
Search
Wiedergabe
Playback
Stop
FF/REW
I
b
II
c
III
d
IV
e
V
f
VI
g
VII
A
Sensor Nocke B
C
Schalter Kassette vorhanden
Tape presence switch
REC.INH.
Dreieck (24)
Rod (24)
OUT
SLOT IN
Ladearm
Loading arm
UN-LO
LO
Andruckrolle
Pinch roller
UN-LO
ON
OFF
Bewegliche Bandführung
Mobile tape guide
UN-LO
LO
UN-LO
*Reinigungssystem der Videoköpfe
*Head cleaning system
OFF
ON
OFF
ON
OFF
32.5mm
26.5mm
21mm
9mm
DISTANCE
0mm
5mm
Gleitschiene
Slider
Bandzugarm
Back tension arm
UN-LO
OFF
ON
OFF
Haken (46)
Hook (46)
OFF
WIND
STAND BY
Einrückhebel
Clutch lever
CLUTCH
DIRECT
Zentrierungshebel (41)
Centring lever (41)
FREE
ON
FREE
ON
FREE
Bandführung (37)
Guide (37)
FREE
SU
TU
FREE
Abrollbremse
Supply main brake
OFF
ON
OFF
Aufrollbremse
Take-up main brake
OFF
ON
OFF
ON
OFF
Sekundäre Abrollbremse
Supply secondary brake
ON
OFF
ON
OFF
ON
OFF
Sekundäre Aufrollbremse
Take-up secondary brake
ON
OFF

*- If fitted

IV- WARTUNG DES LAUFWERKS

⚠Module nicht bei eingeschaltetem Gerät entfernen ! Servicearbeiten am Netzteil nur unter Verwendung eines Regeltrenntrafos durchführen.

1 - ZUGANG ZUM LAUFWERK

1) ABNEHMEN DES GEHÄUSES *(Abb. 3)*

- 3 Schrauben an der Rückseite des Gehäuses und, falls vorhanden, die zwei seitlichen Schrauben entfernen.
- Das Gehäuseoberteil leicht nach hinten ziehen und abheben.
- Die zwei Schrauben, mit denen die Frontblende befestigt ist, links und rechts am Kassettenschacht entfernen.
- 6 Clips (4 an der Oberseite und 2 an der Unterseite) anheben und die Frontblende abnehmen
- Die 2 Schrauben (S1), mit denen das Netzteil befestigt ist, entfernen. Das Netzteil herausnehmen.
- Verbindungsleitungen zur Frontplatine lösen.
- Die 6 Clips (I1), die die Hauptplatine halten, lösen und die Einheit Laufwerk/Platine herausheben.

2) AUSBAUEN DES LAUFWERKS *(Abb. 3, 4)*

- Verbindungsleitungen zu Funktionskontroll- und Kopftrommel-Motor sowie zum Ton-/ Kontrollkopf lösen.
- Schraube (S2) und Antriebsriemen vom Capstanmotor (29) entfernen.
- Schraube (12) an der Antistatikbürste entfernen.
- Schraube (9) und Metallstück (8) entfernen.
- Die 4 Halteclips (I2) lösen und die Laufwerkseinheit anheben; dabei auf die Anschlüsse des Löschkopfs und des Capstanmotors achten.

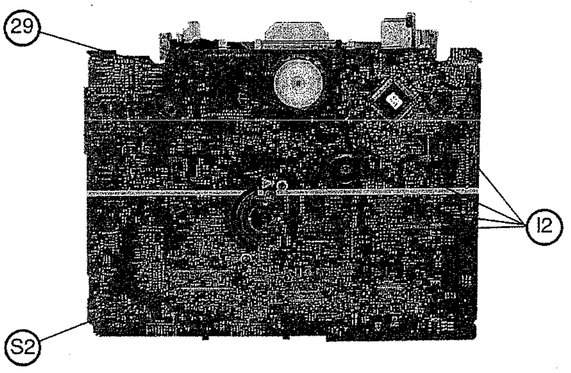


fig. 4

3) AUSBAUEN UND WIEDEREINBAUEN DER KASSETTENHALTERUNG *(Abb. 3 bis 5b)*

AUSBAUEN:*(Abb. 3 und 4)*
- 2 Schrauben links und rechts am Kassettenschacht lösen.
- Den oberen Teil des Kassettenschachtes abheben.
- Den Kassettenhalter bis zum vorderen Anschlag zurückziehen.
- Die zur Kopftrommel zeigende Seite des Kassettenhalters leicht anheben.
- Die weißen Hebel links und rechts am Kassettenhalter entriegeln und den Kassettenhalter in Richtung Kopftrommel schieben, bis die hinteren Führungszapfen aus ihrer Führung genommen werden können
- Jetzt den Kassettenhalter wieder in die entgegengesetzte Richtung ziehen, bis auch die vorderen Führungszapfen aus der Führung genommen werden können.

IV- MECHANISM MAINTENANCE

⚠ Do not disconnect modules when they are energized! Repairs on power supply section are to be carried out only with isolating transformer.

1 - ACCESS TO MECHANISM

1) REMOVAL OF THE CHASSIS *(fig. 3)*

- Remove 3 screws at the rear of the cover and the two side screws.
- Pull the cover slightly backwards and lift it off.
- Remove 2 screws and release 6 clips (4 on the top and 2 on the bottom) securing the front panel.
- Remove 2 screws (S1) securing the power supply unit.
- Carefully remove the power supply unit.
- Unclip the front panel.
- Release 6 clips (I1) securing the main board and lift the mechanism/board assembly out.

2) REMOVAL OF THE MECHANISM *(fig. 3 and 4)*

- Disconnect the function control and drum motors and the audio control head leads.
- Remove screw (S2) and the capstan motor belt (29).
- Remove screw (12) securing the anti-static brush.
- Remove screw (9) and the metal part (8).
- Release the 4 securing clips (I2) and lift the assembly paying attention to the connectors of the full erase head and of the capstan motor.

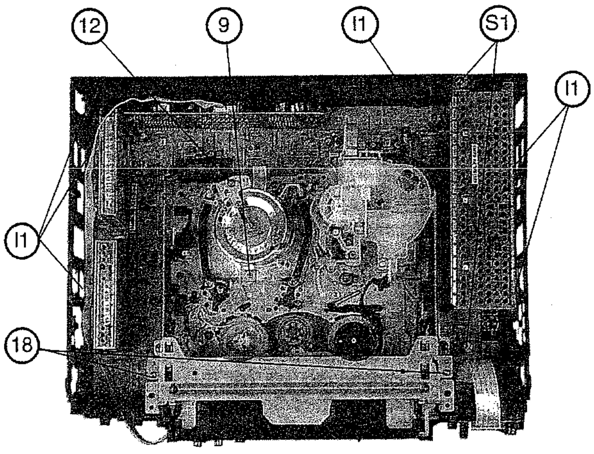


fig. 3

3) REMOVAL AND REFITTING OF THE CASSETTE HOLDER *(fig. 3 to 5b)*

REMOVAL:*(fig. 3 and 4)*
- Take out two screws at the left and the right side of the upper part of the cassette holder.
- Remove the upper part of the cassette holder.
- Pull the remaining part to the upper end position. (Eject position)
- Lift the cassette holder at the side, which shows to the drum
- Release the white levers (left and right of the casstte holder) and push the cassette holder towards the drum until the guide pins at the rear side come out of the guide rails.
- Now pull the cassette holder in the opposite direction until the guide pins at the front side also come out of the guide rails.

WIEDEREINBAUEN:*(Abb. 5a, 5b, 5c und 7)*
- Die vorderen Ansätze des Kassettenträgers wie in Abb. 5a dargestellt einsetzen.
- Die hinteren Ansätze (P1) des Kassettenträgers in Richtung des Trommelmotors kippen.
- Die Hebel (P2) nach oben halten und dabei leicht den Kassettenträgers nach hinten drücken, um so die Ansätze (P3) in die Gleitschienen einzusetzen.
- Den Hebel der Kassettenträgerklappe (27) einsetzen, Abb. 7.
- Die Hebel (P2) wie in Abb.5b dargestellt positioneren, bevor der obere Teil wieder aufgesetzt wird (Abb.5c).

REFITTING:*(fig. 5a , 5b,5c and 7)*
- Move the pins at the front of the cassette holder as shown in figure 5a.
- Move the pins at the back of the cassette holder towards the drum motor.
- Whilst holding the levers , gently push the cassette holder back, so that the back pins go into runners .
- Position the lever of the cassette holder door as shown in figure 7.
- Position the levers as shown in figure 5b before fitting the top unit (figure 5c).

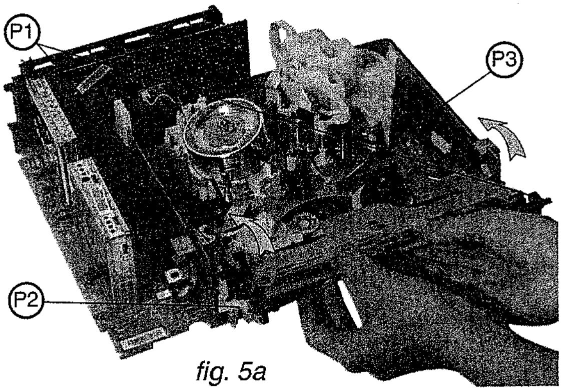


fig. 5a

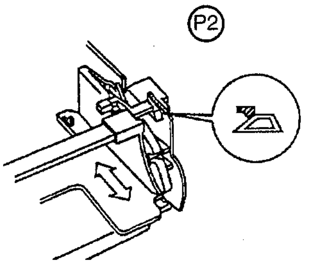


fig. 5b

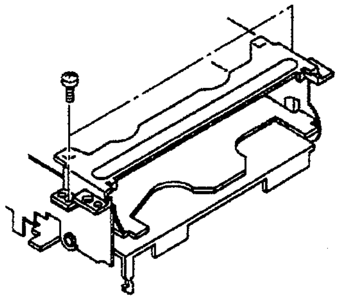


fig. 5c

2 - AUSTAUSCHEN DER WICHTIGSTEN LAUFWERKTEILE

1) AUSTAUSCH DER TROMMELANTRIEBSEINHEIT:
(Abb. 6)

AUSBAUEN:
- Um die Trommelantriebseinheit auszubauen, ist es nicht nötig, das Laufwerk herauszunehmen.
- Den Trommelantrieb abtrennen.
- Schraube (12) und Antistatikbürste entfernen.
- Die Schrauben (3), (4) und (9) sowie die Metallteile entfernen.
- Das Reinigungssystem der Videoköpfe ausbauen.
- Die Trommelantriebseinheit herausnehmen.

WIEDEREINBAUEN:
- In umgekehrter Reihenfolge zum Ausbau vorgehen und dabei vor dem Befestigen von Teil (5) die Trommel leicht gegen den Abwickelteller drücken.
- Den Bandlauf überprüfen.

2 - REPLACEMENT OF THE MAIN PARTS ON THE MECHANISM.

1) REPLACEMENT OF THE DRUM MOTOR:
(fig. 6)

REMOVAL:
- It is not necessary to remove the mechanism, in order to remove the drum motor.
- Disconnect the drum motor.
- Remove screw (12) and the anti-static brush.
- Remove screws (3), (4) and (9) and metal parts.
- Remove video head cleaning system.
- Remove the drum motor.

REFITTING:
- Perform removal operations in reverse order by pushing the drum slightly towards the supply reel before securing the part (5).
- Check the tape path.

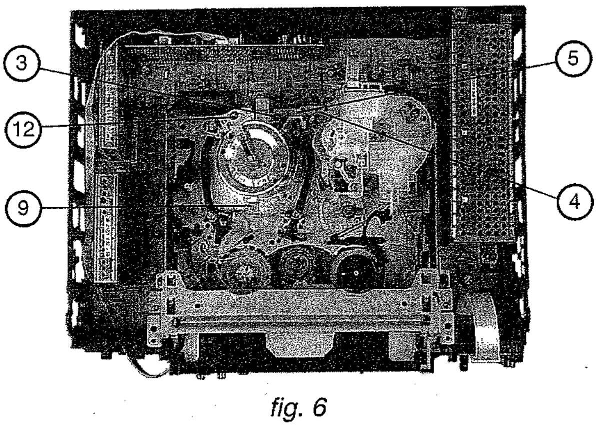


fig. 6

2) AUSTAUSCH DES BANDZUGARMS:
(Abb. 7 und 8)

AUSBAUEN:
- Den Clip (I3) öffnen und den gezahnten Hebel (48) herausziehen.
- Den Hebel (27) entfernen.
- Die Antriebsachse (14) der Kassettenhalterung nach rechts schieben, um sie aus ihrem Sitz zu nehmen.
- Die Achse erst links, dann rechts anheben.
- Die Feder (39) lösen.
- Den Clip (I4) lösen und den Bandzugarm und die Bremse anheben.
- Den Clip (I5) öffnen, um die Befestigung (45) der Bandzugbremse zu lösen.

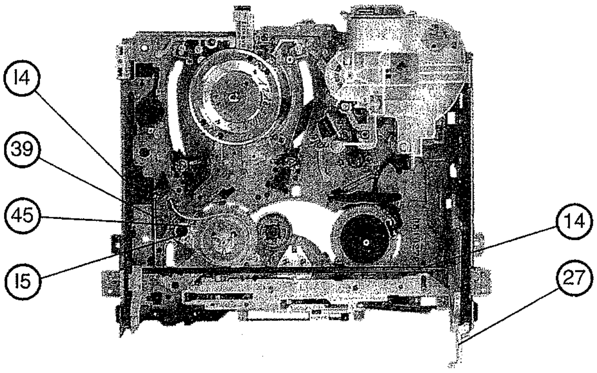


fig. 7

WIEDEREINBAUEN:
- Die Befestigung (45) der Bandzugbremse anbringen.
- Die Bremse um den Abwickelteller legen.
- Den Bandzugarm einsetzen und andrücken, um ihn festzuklemmen.
- Die Feder (39) wieder anbringen.
- Die Achse (14) in ihren Sitz einsetzen.
- Den gezahnten Hebel (48) einsetzen und dabei den ersten Zahn mit dem Kennzeichen (M1) ausrichten.
- Nach dem Austausch des Bandzugarms muß dessen Position gemäß der Angaben auf Seite 13 neu eingestellt werden.

3) AUSTAUSCH VON TON-UND KONTROLLKOPF:
(Abb.9)

AUSBAUEN:
- Den Stecker (C1) herausziehen.
- Die 2 Schrauben (7) entfernen und dann die Kontrollkopfeinheit anheben.

2) REPLACEMENT OF THE TAPE BACK TENSION ARM
(fig. 7 and 8)

REMOVAL:
- Release clip (I3) and remove the toothed lever (48).
- Remove lever (27).
- Slide the cassette holder pin (14) to the right in order to release it from its housing.
- Lift the pin from the left and then from the right.
- Remove spring (39).
- Release clip (I4) and lift the tape back tension arm and brake.
- Release clip (I5) in order to free the attachment (45) of the tape back tension brake.

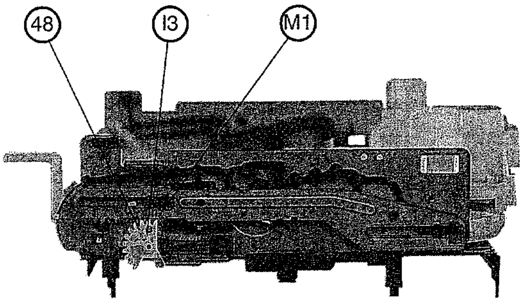


fig. 8

REFITTING:
- Fit attachment (45) of the tape back tension brake.
- Wind the brake around the supply reel.
- Insert the tape tension arm and press to clip in to position.
- Refit spring (39).
- Refit pin (14) in its housing.
- Fit the toothed part (48) by aligning the first tooth with the marking (M1).
- After replacing the tape back tension arm, its position must be re-set as shown in page 13.

3) REPLACEMENT OF THE AUDIO-CONTROL HEAD.
(fig. 9)

REMOVAL:
- Disconnect connector (C1).
- Remove 2 screws (7) and lift the audio-control head.

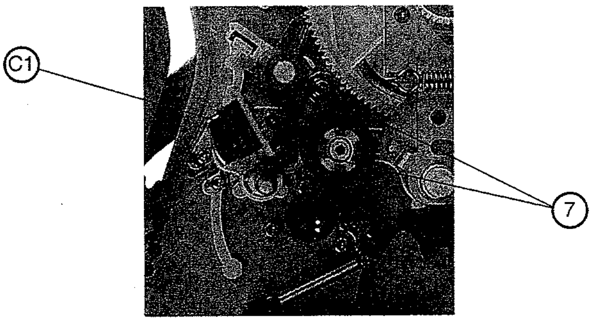


fig. 9

WIEDEREINBAUEN:
- In umgekehrter Reihenfolge zum Ausbau vorgehen.
- Folgende Einstellungen vornehmen: Azimut, Höhe, Neigungswinkel und Kompatibilität (siehe Seite 15, Abschnitt B).

4) AUSTAUSCHEN DES FUNKTIONSKONTROLLMOTORS:
(Abb. 10 und 11)

AUSBAUEN:
- Das Reinigungssystem der Videoköpfe ausbauen.
- In der angegebenen Reihenfolge die 4 Clips (I6), (I7), (I8) und (I9) lösen. Dann die Einheit Gehäuse /Funktionskontrollmotor anheben.
- Das Teil (P4) nach vorherigem Öffnen des entsprechenden Clips anheben.
- Das Getriebe (P5) herausnehmen.
- Das Ende der Gewindestange (P6) leicht anheben.
- Den Clip (I10) des Funktionsschalters lösen.
- Die Einheit Motor/Schalter aus der Gleitschiene (P7) nehmen.
- Den Motor ablöten.

WIEDEREINBAUEN:
- Darauf achten, daß das Loch (H1) der Nocke über dem des Gehäuses liegt.
- In umgekehrter Reihenfolge zum Ausbau vorgehen, ohne dabei zu vergessen, die Gewindestange in ihre Clips einzusetzen und darauf zu achten, daß die Kennzeichen (M2) des Funktionsschalters und (M3) des Gehäuses übereinstimmen.

REFITTING:
- Perform the removal operations in reverse order.
- Adjust the azimuth, height, inclination and check compatibility (see page 15 section B).

4) REPLACEMENT OF THE FUNCTION CONTROL MOTOR:
(fig. 10 and 11)

REMOVAL:
- Remove the video head cleaning system.
- Release, in this order, 4 clips (I6), (I7), (I8) and (I9) securing the casing and function control motor assembly and lift it.
- Lift part (P4) after releasing its clip.
- Remove gear (P5).
- Slightly lift the end of the worm screw (P6).
- Release clip (I10) of the function switch.
- Remove the motor/switch assembly from the slide rail (P7).
- Unsolder the motor connections.

REFITTING:
- Check that hole (H1) on the cam is exactly over the hole on the chassis.
- Perform removal operations in reverse order remembering to insert the worm screw in its clips and making sure that the markings (M2) on the function switch correspond to the markings (M3) on the casing.

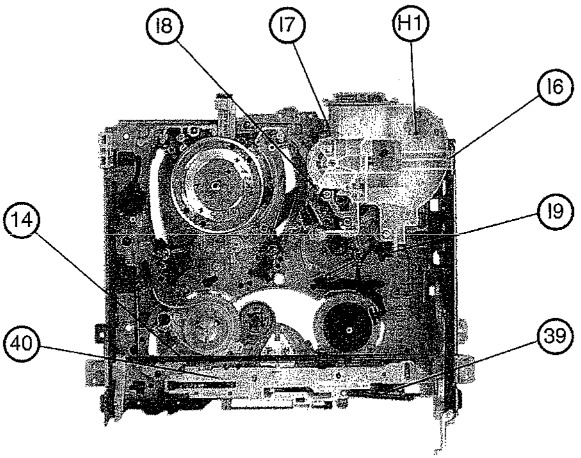


fig. 10

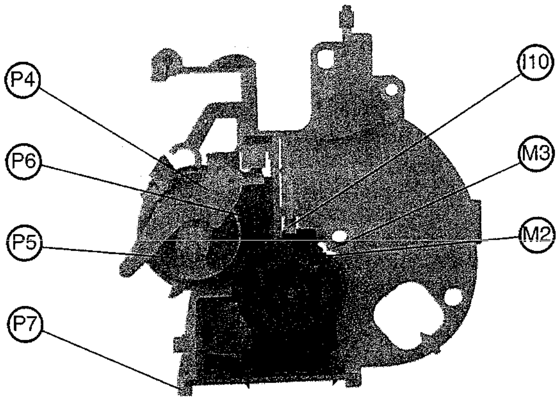


fig. 11

5) AUSTAUSCH DER FUNKTIONSSTEUERNOCKE:
(Abb. 10, 12, 13 und 14)

AUSBAU:
- Die Einheit Gehäuse/Funktionskontrollmotor gemäß den Angaben des vorherigen Kapitels ausbauen.
- Die Antriebsachse (14) der Kassettenhalterung ausbauen.
- Die Feder (39) und die Gleitschiene (40) entfernen.
- Die Andruckrolle (1) und den Hebel (25) entfernen.
- Die Nocke herausnehmen.

5) REPLACEMENT OF THE CONTROL CAM:
(fig. 10, 12, 13 and 14)

REMOVAL:
- Remove the casing and function control motor assembly as discribed in the previous section 4.
- Remove cassette holder drive pin (14)'.
- Remove spring (39) and the slide rail (40).
- Remove pinch roller (1) and the lever (25).
- Remove the cam.

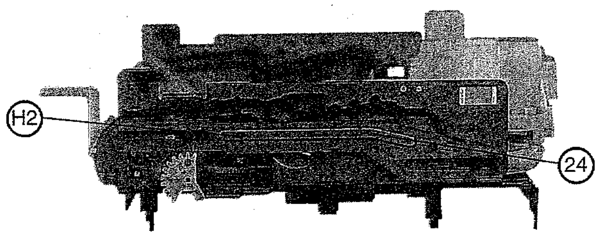


fig. 12

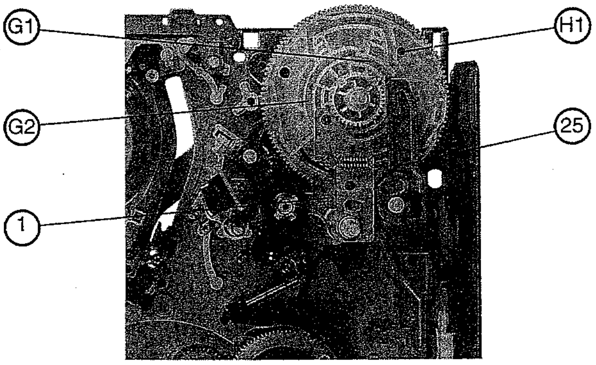


fig. 13

WIEDEREINBAUEN:

- Die beweglichen Bandführungen und den Bandzugarm am Anschlag "Ausgabe" festhalten.
- Den Hebel (23) montieren und dabei sorgfältig seinen Zapfen in das Loch des Dreiecks (24) einführen.
- Das Dreieck (24) so positionieren, daß das Loch (H2) über dem des Gehäuses liegt.
- Die Nocke so positionieren, daß das Loch (H1) über dem des Gehäuses liegt.
- Den Hebel (25) einsetzen und dabei seinen Zapfen in die Auskehlung (G1) einführen.
- Die Andruckrolle unter Einführen des Zapfens in die Auskehlung (G2) anbringen und dann die Einheit Gehäuse/ Funktionskontrollmotor einsetzen. Dabei ist darauf zu achten, daß das Kennzeichen auf dem Schalter dem des Gehäuses gegenüberliegt.
- Die Gleitschiene (40) einsetzen und die Feder (39) wieder anbringen.

6) AUSTAUSCH DER LADEARME:

(Abb. 15 und 16)

AUSBAU:

- Den Clip (35) entfernen und den Antriebshebel (36) der Ladearme abnehmen.
- Die Ladearme anheben.

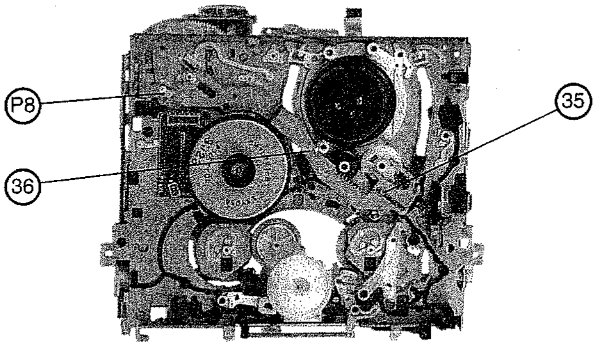


fig. 15

WIEDEREINBAU:

- Die beweglichen Bandführungen am Anschlag "Ausgabe" festhalten.
- Erst den Aufroll- dann den Abroll-Ladearm einbauen, und zwar so, daß sich die Kennzeichen (M4) und (M5) gegenüberliegen.
- Das Ende des Hebels (36) soweit in die Gleitschiene (P8) schieben, bis sich das Kennzeichen (M6) und der erste Zahn des Aufrollgetriebes einander gegenüberliegen.
- Den Clip wieder anbringen.

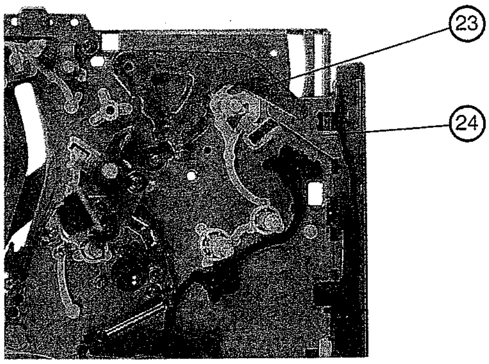


fig. 14

REFITTING

- Hold the mobile guide rails and the tape back tension arm against the unloading stop.
- Fit lever (23) making sure that the nipple is fitted inside the hole on the rod (24).
- Position the rod (24) so that hole (H2) is exactly over the hole on the chassis.
- Position the cam so that hole (H1) is exactly over the hole on the chassis.
- Fit lever (25) by inserting its nipple in the groove (G1).
- Fit the pinch roller by inserting its nipple in the groove (G2) and then fit the casing and function control motor assembly, making sure that the marking on the switch is opposite the marking on the casing.
- Fit slide rail (40) and spring (39).

6) REPLACEMENT OF THE TAPE LOADING ARMS

(fig. 15 and 16)

REMOVAL:

- Remove clip (35) and remove the tape loading arm drive lever (36).
- Remove the take-up and supply insertion arms.
- Remove mobile tape guides .

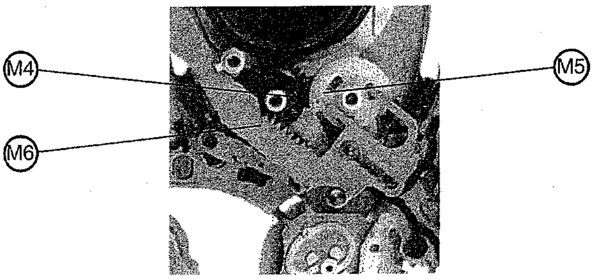


fig. 16

REFITTING:

- Fit the mobile tape guides and hold against the play position on the main deck.
- Fit the take-up guide insertion arm followed by the supply guide insertion arm making sure that the alignment holes (M4) and (M5) are facing each other.
- Insert the end of the lever (36) in the slide rail (P8) and then slide it until the marking (M6) is facing the first tooth of the take-up gear.
- Refit the clip.

7) AUSTAUSCHEN DES ZWISCHENGETRIEBES:
(Abb. 17, 18 und 19)

AUSBAUEN:
- Die Gleitschiene (40) ausbauen.
- Den Clip (32) und das Getriebe (31) entfernen.
- Den Clip (I11) lösen und die Führung (37) herausnehmen.
- Den Clip (30) entfernen und das Zwischengetriebe (33) anheben.

7) REPLACEMENT OF THE INTERMEDIATE PULLEY:
(fig. 17, 18 and 19)

REMOVAL:
- Remove slide rail (40).
- Remove clip (32) and gear (31).
- Release clip (I11) and remove guide (37).
- Release clip (30) and lift the intermediate pulley (33) off.

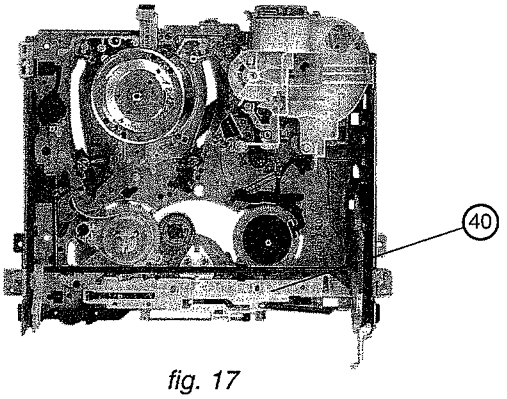


fig. 17

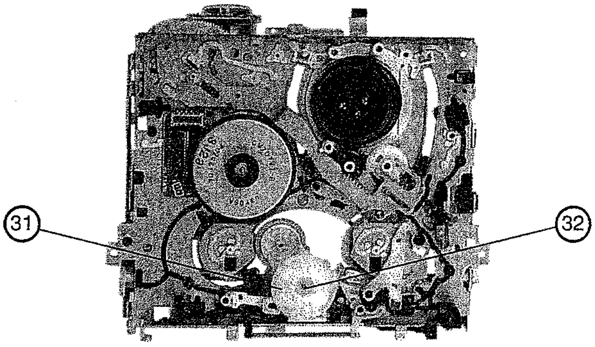


fig. 18

WIEDEREINBAUEN:
- Den Einrückhebel (34) in die Auskehlung des Zwischengetriebes einführen und dann dieses auf seiner Achse positionieren.
- In umgekehrter Reihenfolge zum Ausbau vorgehen.

REFITTING :
- Insert the clutch tab (34) in the groove of the intermediate pulley and fit the latter on its spindle.
- Perform the removal operations in reverse order for the other parts.

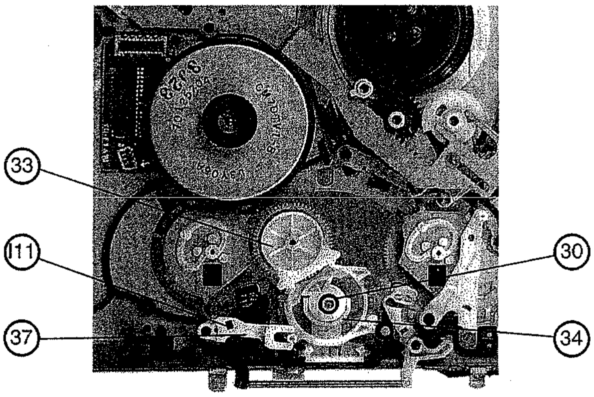


fig. 19

V - MECHANISCHE EINSTELLUNGEN UND KONTROLLEN

ERFORDERLICHES MATERIAL:

- Bandzug-Meß-Kassette.
- Kassette MH4.
- Zweistrahloszilloskop mit Bandbreite >10 MHz.
- Fernsehgerät oder Farbmonitor.

1 - EMPFEHLUNGEN DES HERSTELLERS:

- Nach allen Eingriffen an einem Laufwerk ist es ratsam, die Reinigungs-, Überprüfungs und Einstellarbeiten des Bandlaufs vorzunehmen.

V - ADJUSTMENTS AND MECHANICAL CHECKS

EQUIPMENT REQUIRED:

- Torque measurement cassette .
- MH4 tape.
- One dual-trace oscilloscope, pass band > 10 MHz.
- One colour television set or monitor.

1 - MANUFACTURER RECOMMENDATIONS:

- Before any work is carried out on the mechanism, the tape path should be cleaned, checked and adjusted.
- Check that the mobile tape guides rotate freely.

- Stellen Sie sicher, daß sich die beweglichen Bandführungen frei drehen.
- Nach dem Einlegen der Kassette prüfen, ob sich die beweglichen Bandführungen in ihren Endpositionen befinden.
- Prüfen, ob die Capstanachse und die Andruckrolle parallel zueinander stehen.
- Mit einem Tupfer alle Partien reinigen, die sich in direktem Kontakt zum Band befinden.
- Zur Reinigung der Kopftrommel, der Videoköpfe und des Drehtransformators wird empfohlen, Baumwollhandschuhe zu tragen, um Fettablagerungen auf den Flächen zu verhindern, die mit dem Band in Berührung kommen.

- After insertion, check that the mobile tape guides are correctly positioned in their stops.
- Check that the capstan shaft and the pinch roller are parallel.
- Using a pad, clean all the parts directly in contact with the tape.
- To clean the video head drum , it is recommended to wear cotton gloves and use a pad so that there are no grease marks left on the surfaces in contact with the tape.

2 - EINSTELLEN DER BANDZUGBREMSE:

(Abb. 20)

- Die Kassettenhalterung ausbauen.
- Den Videorecorder auf Wiedergabe schalten.
- Mit einem Schraubendreher die Schraube (S3) soweit festdrehen, bis sich der BANDZUG-Fühlhebel 7,5 ± 1mm vom Gehäuserand entfernt befindet (durch den langen Strich (M7) gekennzeichnet).
- Den Bandzug wie nachstehend angegeben überprüfen.

2 - TAPE BACK TENSION BRAKE ADJUSTMENT

(fig. 20)

- Remove the cassette holder.
- Set mechanism in playback mode.
- Using a screwdriver turn screw (S3) so that the arm tension pin is 7.5 ± 1 mm from the edge of the chassis (marked by the long line (M7)).
- Check the tape tension as shown below.

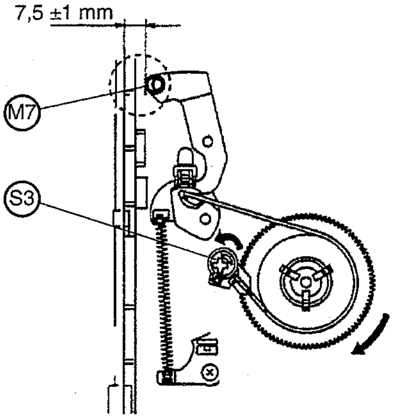


fig. 20

3 - ÜBERPRÜFUNG DES BANDZUGS UND DES WICKELTELLER-DREHMOMENTES:

BANDZUG :

- Die Bandzug-Meßkassette abspielen.
- Der Bandzug auf dem Abwickelteller muß zwischen **45** und **95** g/cm betragen.
- Wenn der Bandzug nicht in diesem Bereich liegt, die Wickelteller-Kopplungseinheit austauschen.

WICKELTELLER-DREHMOMENT :

- Das Drehmoment des Aufwickeltellers muß zwischen **125** und **200** g/cm betragen.
- Wenn der Bandzug nicht in diesem Bereich liegt, die Wickelteller-Kopplungseinheit austauschen.

3 - CHECKING THE BACK TAPE TENSION AND THE SUPPLY REEL TORQUE:

TAPE TENSION:

- Use the torque measurement cassette in the Playback mode.
- The tension on the tape on the reel must be between **45** and **95** gr/cm.
- If the tension lies outside these values, replace the clutch assembly.

REEL TAKE-UP TORQUE:

- The torque on the take-up reel must be between **125** and **200** gr/cm.
- If this is not the case, replace the take-up reel drive clutch assembly.

4 - STATIK-EINSTELLUNGEN AM BANDLAUF:

(Abb. 21)

VORSICHTSMASSNAHMEN:

Der Bandlauf wurde im Werk präzise eingestellt, er braucht also nicht nachgestellt werden. Dennoch können Verschleißerscheinungen oder ein Defekt des Gerätes, der

4 - STATIC ADJUSTMENTS OF THE TAPE PATH: *(fig. 21)*

PRECAUTIONS:

The video tape path is precisely aligned at the factory and breakdown may require the replacement of parts and necessitate the adjustment of the tape path. **For this**

das Auswechseln eines sich auf dem Bandlauf befindlichen Teiles erforderlich macht, dazu führen, daß der Bandlauf neu eingestellt werden muß. **Wir empfehlen, für diesen Arbeitsgang keine Abgleich-Kassette zu verwenden.** Schalten Sie das Gerät auf Wiedergabe und ziehen Sie nach erfolgtem Einfädeln den Netzstecker. Überprüfen Sie die richtige Bandlage in der Mechanik: das Band muß den Bandzugpin, den Löschkopf, die beweglichen Bandführungen, die Ton-/Kontrollkopfeinheit, die Videokopftrommel und die festen Aufrollbandführungen berühren.

operation, it is recommended that the alignment test tape is not used. Load a normal video cassette, select the PLAYBACK mode and allow the tape to fully load, switch OFF the power . Check that the tape is correctly loaded around the mechanism, the tape must be in contact with the following items, back tension pole, the full erase head, tape guides, video head drum and audio-control head.

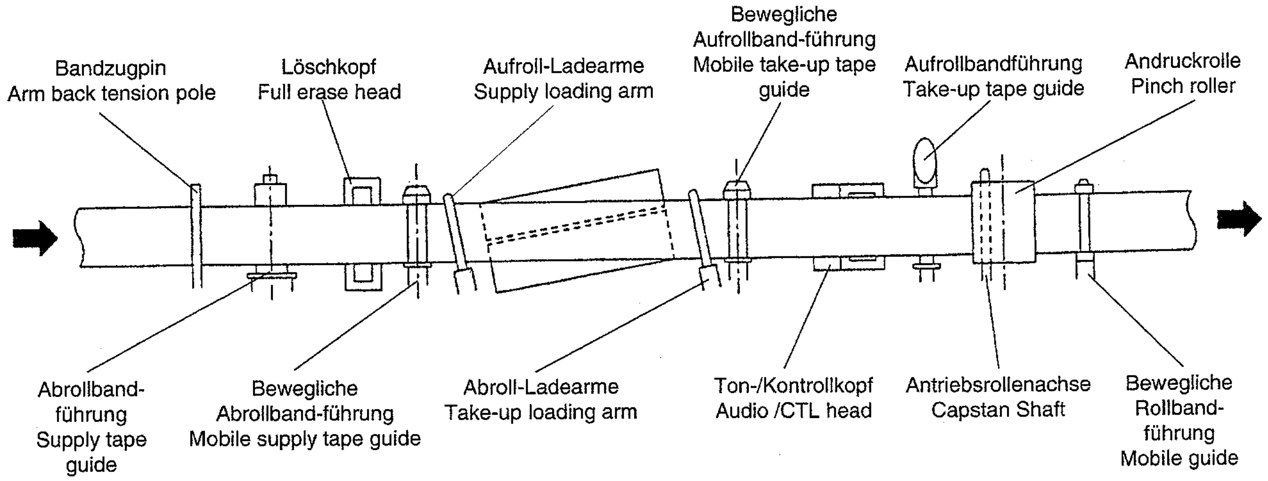

Bandzugpin
Arm back tension pole
Löschkopf
Full erase head
Aufroll-Ladearme
Supply loading arm
Bewegliche
Aufrollband-führung
Mobile take-up tape guide
Aufrollbandführung
Take-up tape guide
Andruckrolle
Pinch roller
Abrollband-führung
Supply tape guide
Bewegliche
Abrollband-führung
Mobile supply tape guide
Abroll-Ladearme
Take-up loading arm
Ton-/Kontrollkopf
Audio /CTL head
Antriebsrollenachse
Capstan Shaft
Bewegliche
Rollband-führung
Mobile guide

fig. 21

VOREINSTELLUNG DER BEWEGLICHEN BANDFÜHRUNGEN:
Wenn das Band an einer der Bandführungen nicht glatt anliegt, diese so einstellen, bis das Band glatt anliegt.

MOBILE TAPE GUIDE PRE-SETTING:
If there is tape folding on one of the mobile tape guide, adjust the position of the guide for correct alignment.

VOREINSTELLUNG DES TON-/KONTROLLKOPFES:
(Abb. 22)
Wenn das Band an der festen Aufrollbandführung nicht glatt anliegt, den Neigungswinkel (I) der Ton-/Kontrollkopfeinheit nachstellen.

AUDIO CONTROL HEAD PRE-SETTING:
(fig. 22)
If the tape folds on the take-up tape guide, adjust the inclination (I) of the audio control head.

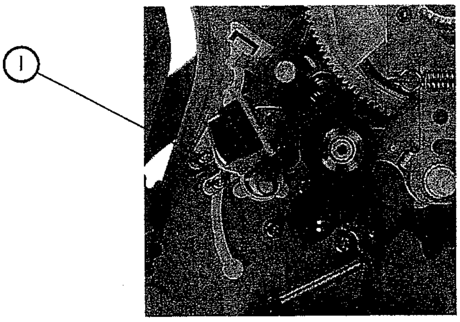


fig. 22

5 - DYNAMIK-EINSTELLUNGEN AM BANDLAUF:

Für diese Dynamik-Einstellungen:
- Die Kassettenhalterung ausbauen.
- Die Grauabstufungen der Referenzkassette ablesen.
- Auf einem Zweistrahl-Oszilloskop (mit Drum Flip Flop (BT002) getriggert) das Video-FM-Signal (BV131) sichtbarmachen (Umschalten der Videoköpfe auf Wiedergabe).

5 - DYNAMIC ADJUSTMENTS ON THE TAPE PATH:

For these dynamic adjustments:
- Remove the cassette holder.
- Playback the grey scale section on the alignment tape.
- Display on a dual-trace oscilloscope the FM video signal (BV131) synchronized by the 25 Hz flip-flop (BT002) (switching of the video heads in playback mode).

A - Feineinstellung der beweglichen Bandführungen:

(Abb. 23)

Die optimale Einstellung ist erreicht, wenn die FM-Hüllkurve von Spuranfang bis Spurende eine konstante Amplitude hat. Eine schlechte Einstellung der beweglichen Abrollbandführung zieht entweder ein Rasterflimmern oder einen Rauschbalken im oberen Teil des Bildes nach sich.
Gleichen Sie die bewegliche Abrollbandführung so ab, daß jegliche Stauchung der FM-Hüllkurve am Spuranfang vermieden wird. Eine schlechte Einstellung der beweglichen Aufrollbandführung zieht Rauschbalken im unteren Teil des Bildes nach sich.
Gleichen Sie die bewegliche Aufrollbandführung so ab, daß jegliche Stauchung der FM-Hüllkurve am Spurende vermieden wird.
Stellen Sie durch Betätigen der Spurlagenfunktion sicher, daß die Amplitude der FM-Hüllkurve von Spuranfang bis Spurende gleichmäßig abnimmt. Falls dies nicht der Fall ist, wiederholen Sie bitte den Abgleich.

A - Fine adjustment of the mobile tape guides:

(fig. 23)

The optimum adjustment is obtained when the amplitude of the FM envelope is constant from the beginning to the end of the track.
If the mobile supply tape guide is incorrectly set, either the frame jumps or there is a noise bar at the top of the screen.
Adjust the mobile supply tape guide to eliminate any constriction of the FM envelope at the beginning of the track.
If the mobile take-up tape guide is incorrectly set, there will be noise bars at the bottom of the screen.
Adjust the mobile take-up tape guide to eliminate any constriction of the FM envelope at the end of the track.
Check, using the tracking control, that the amplitude of the FM envelope decreases in a linear manner from the beginning to the end of the track. If there is pinching of the envelope on the supply or take-up side, re-adjust the corresponding tape guide.

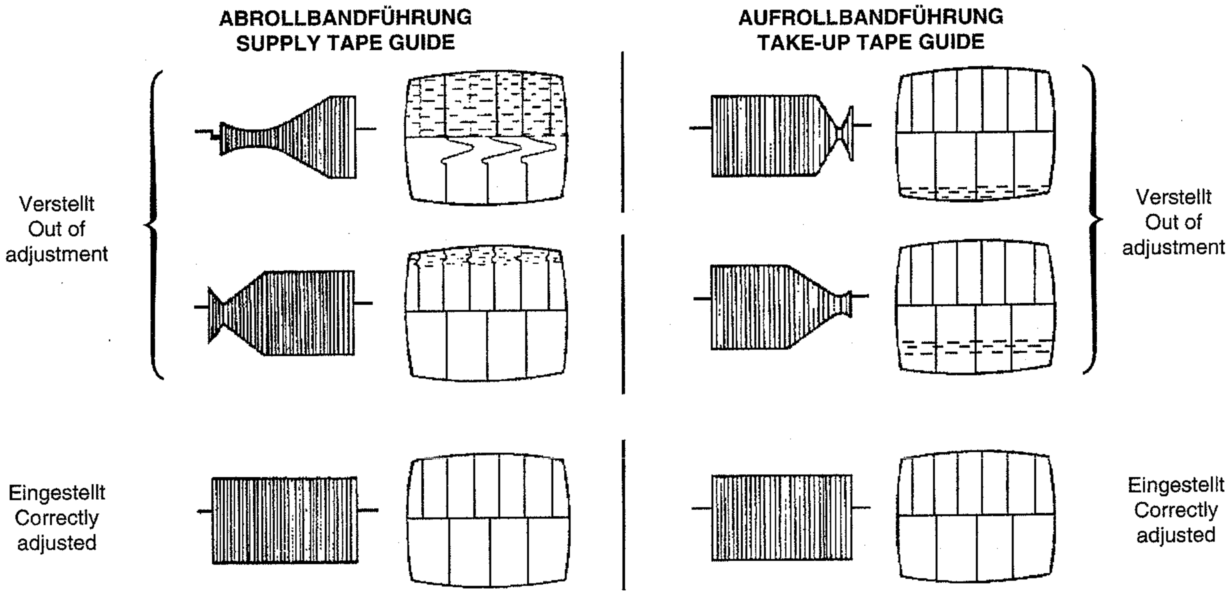


fig. 23

B - Feineinstellung des Ton- / Kontrollkopfes

(ABB. 24 und 25)

Die richtige Einstellung der Lage des Ton- / Kontrollkopfes ist notwendig, um ein korrektes Audio-Ausgangssignal und einen optimalen Rauschabstand zu garantieren.
Ein Abgleichfehler kann außerdem zu einer Instabilität in der Servo-Regelung führen. Besonders wichtig ist diese Einstellung bei Geräten mit Index Suchlauf.
Zur Beobachtung des Audio-Signals wird ein Oszilloskop an den Audio Ausgang angeschlossen.

- Testkassette mit Grautreppe und Audio-Signal (6kHz) abspielen.
- Die Azimut-Schraube (A) nachstellen, bis das Maximum des Audio-Signals am Ausgang erreicht ist.
- Die Höhe des Ton- /Kontrollkopfes mit der Mutter (H) so einstellen, daß das Audio-Signal eine flache Hüllkurve aufweist.
- Die Schrauben (A) und (H) abwechselnd und immer nur wenig (nicht mehr als 45° auf einmal) nachstellen, um einen maximalen Audio-Pegel am Ausgang zu erzielen.

B - Fine adjustment of the audio control head :

(fig. 24 and 25)

The position of the audio control head must be correctly set to ensure that the audio output and the signal /noise ratio are correct.
A misalignment may cause the servo circuits to be unstable. The precision of the adjustment is particularly important for models with index search.
To observe the audio signal, connect an oscilloscope to the AUDIO output.

- Playback the grey scale pattern on video cassette (Audio 6 kHz).
- Adjust the azimuth screw (A) to obtain the maximum output level.
- Adjust the height of the audio control head on the screw (H) so that the envelope of the audio signal is flat.
- Adjust the screws (A) and (H) in alteration and in small steps (45° at a time) to obtain the maximum output level.

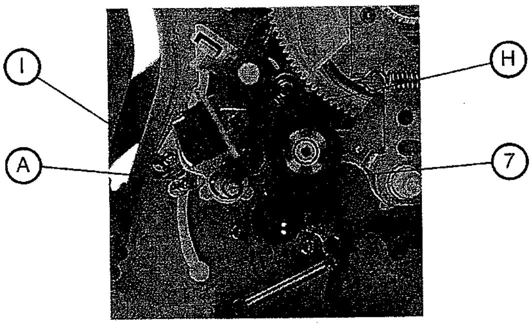


fig. 24

C - Kompatibilitätseinstellung *(Abb. 24)*

Zunächst muß der Videorecorder in sich kompatibel sein. Dazu ein Farbbalken-Testbild aufnehmen und überprüfen, ob die Wiedergabe dieser Aufnahme optimal ist.

- Den Tastkopf eines Oszilloskops an den FM-Ausgang (BV131) anschließen.
- Spurlagenfunktion aufrufen und durch Drücken der “+” und “-” Tasten die Spurlage auf Null stellen.
- Das Oszilloskop extern mit dem Kopftrommel-Schaltsignal (Drum Flip Flop) triggern. Die positive Flanke zum Triggern verwenden, um das Signal von Kopf 2 darzustellen.
- FM-Wert für die Grautreppe ablesen.
- Die Schraube (7) lösen.
- Den Ton- / Kontrollkopfes unter Beachtung des Signals auf den Videoköpfen mit einem Kreuzschraubenzieher, der in die Einkerbung gesetzt wird (ohne das Gehäuse zu durchqueren), drehen, um den FM-Pegel auf Maximum zu stellen. Die Schraube (7) sofort wieder anziehen.
- Durch Betätigung der Spurlage-Funktion überprüfen, ob das Maximum des FM-Pegels in der Nullstellung erreicht ist.

VI - ÜBERPRÜFUNG DES LAUFWERKS UND FEHLERSUCHE

1 - ÜBERPRÜFUNG VON MOTOR- UND SENSORSYSTEM

Motor- und Sensorsystem wie in dem Diagramm auf Seite 17 dargestellt auf Fehlfunktionen untersuchen.

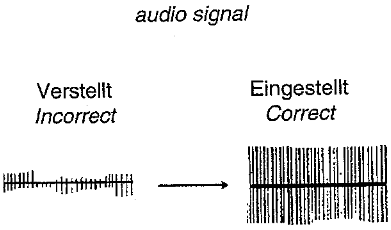


fig. 25

C - Compatibility adjustment *(fig. 24)*

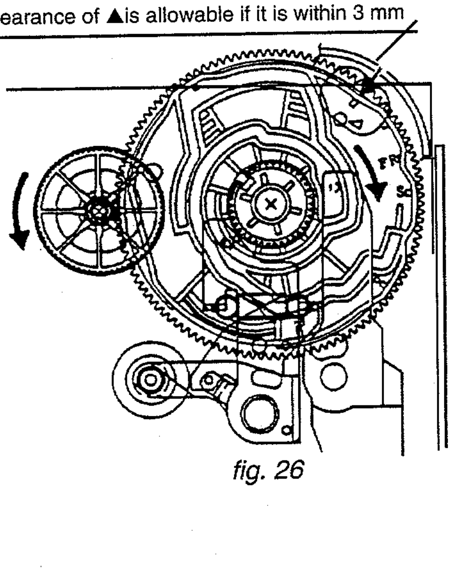
First of all, the video recorder must be made compatible with itself, it is therefore, necessary to record a colour bar test pattern and check that the playback of this recording is optimum.

- Connect the probe of the oscilloscope envelope to the FM output (BV131).
- Enter the tracking mode and select manual tracking.
- Press on the + and - keys and set the track to 0.
- Synchronize the oscilloscope with the head switching flip-flop. Use the positive trigger to display the signal from head 2.
- Playback the grey scale pattern.
- Loosen the screw (7).
- While observing the signal on the video heads, tilt the audio control head,using a Philips screwdriver placed in the notch (so as not to pass through the chassis), in order to obtain the maximum output level. Tighten the screw (7) immeddiately
- Check by pressing the + and - phase keys that the signal is maximum for a track equal to 0.

VI - MECHANICAL DECK TROUBLE SHOOTING AND CHECK METHOD

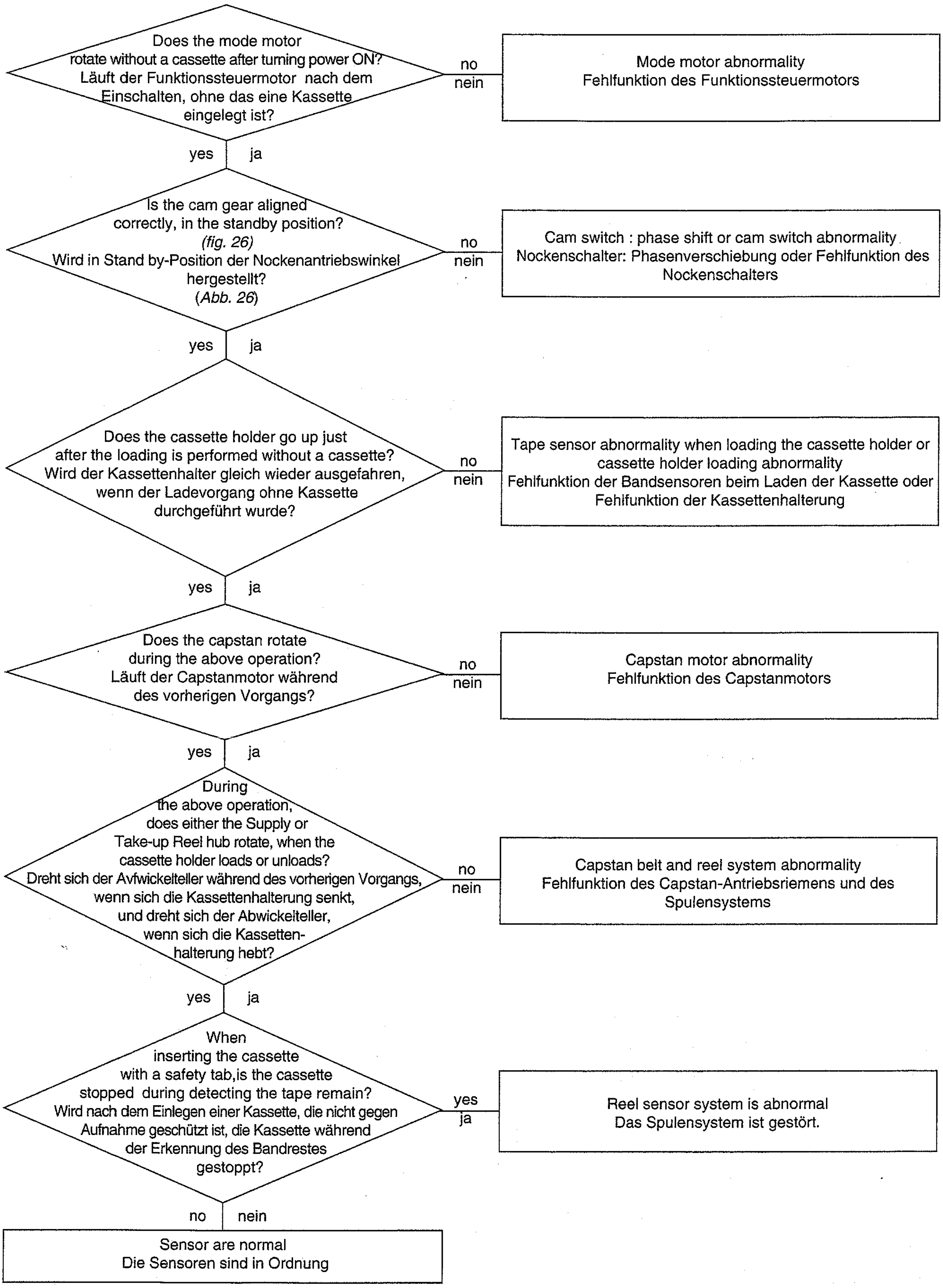
1 - MOTOR SENSOR SYSTEM CHECK

Check whether any abnormalities are found in the motor or the sensor system as follows in the flow chart on page 17



Der Abstand von ▲ ist zulässig, wenn er innerhalb von 3 mm liegt
The clearance of ▲is allowable if it is within 3 mm

fig. 26



Does the mode motor rotate without a cassette after turning power ON?
Läuft der Funktionssteuermotor nach dem Einschalten, ohne das eine Kassette eingelegt ist?

no / nein: Mode motor abnormality
Fehlfunktion des Funktionssteuermotors

yes / ja

Is the cam gear aligned correctly, in the standby position? *(fig. 26)*
Wird in Stand by-Position der Nockenantriebswinkel hergestellt? (*Abb. 26*)

no / nein: Cam switch : phase shift or cam switch abnormality
Nockenschalter: Phasenverschiebung oder Fehlfunktion des Nockenschalters

yes / ja

Does the cassette holder go up just after the loading is performed without a cassette?
Wird der Kassettenhalter gleich wieder ausgefahren, wenn der Ladevorgang ohne Kassette durchgeführt wurde?

no / nein: Tape sensor abnormality when loading the cassette holder or cassette holder loading abnormality
Fehlfunktion der Bandsensoren beim Laden der Kassette oder Fehlfunktion der Kassettenhalterung

yes / ja

Does the capstan rotate during the above operation?
Läuft der Capstanmotor während des vorherigen Vorgangs?

no / nein: Capstan motor abnormality
Fehlfunktion des Capstanmotors

yes / ja

During the above operation, does either the Supply or Take-up Reel hub rotate, when the cassette holder loads or unloads?
Dreht sich der Avfwickelteller während des vorherigen Vorgangs, wenn sich die Kassettenhalterung senkt, und dreht sich der Abwickelteller, wenn sich die Kassettenhalterung hebt?

no / nein: Capstan belt and reel system abnormality
Fehlfunktion des Capstan-Antriebsriemens und des Spulensystems

yes / ja

When inserting the cassette with a safety tab,is the cassette stopped during detecting the tape remain?
Wird nach dem Einlegen einer Kassette, die nicht gegen Aufnahme geschützt ist, die Kassette während der Erkennung des Bandrestes gestoppt?

yes / ja: Reel sensor system is abnormal
Das Spulensystem ist gestört.

no / nein: Sensor are normal
Die Sensoren sind in Ordnung

2 - CHECKLISTE FÜR DIE FEHLERSUCHE

2 - TROUBLESHOOTING CHECKLIST

Case - Fall	Fault/symptom - Fehler/Symptom	Possible cause - mögliche Ursache	Check method - Überprüfung
1	• Power doesn't turn on. Loading operation is defective. Mode shift operation is defective. • Das Gerät schaltet nicht ein. Fehlerhafter Ladevorgang. Fehlerhafter Umspringvorgang.	• Mechanism stops due to mechanical phase mismatch. • blockierung aufgrund von Phasenverschiebung in der Mechanik	• Check mode shift "cassette out FF/REW position can be performed when turning worm wheel. • Überprüfen, ob das Umspringen von FF auf REW möglich ist, wenn das Schneckenrad gedreht wird.
	• Loading operation is not performed • Ladevorgang erfolgt nicht	• Loading motor doesn't rotate.(loading motor is defective or circuit is defective) • Lademotor läuft nicht. (Lademotorfehler, Schaltkreisfehler)	• Check loading motor whether it turns by the outer power supply (12,5V) • Überprüfen, ob der Lademotor mit einem externen Netzteil läuft (12,5V)
	• Unloading operation is not performed • Entladevorgang erfolgt nicht	• S reel does'nt wind the tape • Der Abwickelteller spult nicht auf	• Refer to case 3 in this table. • Siehe Fall 3.
2	• Playback operation is not performed • Keine Wiedergabe	• Main brake is not released (ON) T soft brake is not released (ON) Idler does'nt swing Pinch doesn't press • Hauptbremse nicht gelöst (ON) Aufrollhilfsbremse nicht gelöst (ON) Zwischenrad ist blockiert. Andruckrolle drückt nicht	• Check mechanical position as in playback mode • Position der Mechanikteile überprüfen (Wiedergabe)
		• Capstan motor doesn't rotate (capstan motor is defective or circuit is defective) • Capstanmotor läuft nicht (Capstanmotor-, Schaltkreisfehler)	• Check capstan motor • Capstanmotor überprüfen
	• Playback picture doesn't appear. Video recording can't be performed • Das Wiedergabebild erscheint nicht. Videoaufzeichnung unmöglich	• In case of no mechanical problem: Drum is defective.(circuit is defective) • Falls kein Mechanikfehler vorliegt: Kopftrommelfehler.(Fehler im Schaltkreis)	• Check drum assembly • Kopftrommel überprüfen
3	• Playback interruption • Wiedergabe unterbrochen	• Reel rotation detection is defective. (sensor is defective, circuit is defective) • Fehler in der Spulendrehungserkennung. (Sensorfehler, Schaltkreisfehler)	• Check sensor output • Sensorenausgang überprüfen
	• Recording interruption • Aufzeichnung unterbrochen	• Idler doesn't swing • Zwischenrad ist blockiert.	• Check mechanical position as in Playback mode • Position der Mechanikteile (Wiedergabe) überprüfen
		• Reel belt is removed • Spulenantriebsriemen fehlt	• Check the reel belt is removed or not • Überprüfen, ob der Spulenantriebsriemen vorhanden ist
4	• FF operation is not performed. FF operation is defective. REW operation is not performed. REW operation is defective. Others : REV/FF is not performed. Others : REV/FF is defective. • Band wird nicht vorgespult. Fehler beim schnellen Vorlauf. Band wird nicht zurückgespult. Fehler beim schnellen Rücklauf. Andere : kein REV/FF. Andere : kein REV/FF.	• Main brake is not released (ON) T soft brake is not released (ON) Idler does'nt swing Pinch is not released • Hauptbremse nicht gelöst (ON) Aufrollhilfsbremse nicht gelöst (ON) Zwischenrad ist blockiert. Andruckrolle ist nicht gelöst	• Check mechanical position as in FF/REW mode • Position der Mechanikteile (FF/REW) überprüfen
		• Capstan motor doesn't rotate (capstan motor is defective or circuit is defective) • Der Capstanmotor läuft nicht (Capstanmotorfehler oder Schaltkreisfehler)	• Check capstan motor • Capstanmotor überprüfen

Case - Fall	Fault/symptom - Fehler/Symptom	Possible cause - mögliche Ursache	Check method - Überprüfung
5	• REVIEW is not performed	• Main brake is not released (ON) T soft brake is not released (ON) Idler does'nt swing Pinch doesn't press	• Check mechanical position as in REVIEW mode
	• Kein REVIEW	• Hauptbremse nicht gelöst (ON) Aufrollhilfsbremse nicht gelöst (ON) Zwischenrad ist blockiert. Andruckrolle drückt nicht	• Position der Mechanikteile (REVIEW) überprüfen
		• Capstan motor doesn't rotate (capstan motor is defective or circuit is defective)	• Check capstan motor
		• Capstanmotor läuft nicht (Fehler im Capstanmotor oder im Schaltkreis)	• Capstanmotor überprüfen
6	• Slot-in is not performed Cassette can't be inserted	• When rod (24) is mounted on the mechanical deck, the position is not correct	• Check mechanical position shown in *(fig. 8)*
	• Kassette wird nicht eingezogen. Kassette kann nicht eingelegt werden	• Dreieck (24) nicht in der richtigen Stellung auf dem Laufwerk angebracht	• In *(Abb. 8)* gezeigte Position der Mechanikteile überprüfen
7	• Capstan servo doesn't work Capstan servo is uneven	• Capstan motor is defective	• Check capstan motor
	• Capstan-Servo funktioniert nicht Capstan-Servo ungleichmässig	• Fehler im Capstanmotor	• Capstanmotor überprüfen
	• Tape speed is abnormal FG pulse is not output	• Audio control head output is defective (circuit is defective)	• Check audio control head Check control output
	• Bandgeschwindigkeit ist anormal Keine FG-Pulsausgabe	• Fehler am Ton-/Kontrollkopfausgang (Schaltkreisfehler)	• Ton-/Kontrollkopf überprüfen Kontrollausgang überprüfen
8	• Audio output doesn't come out Audio output is small Audio output variation is large Audio output is uneven Audio distortion	• Audio control head is defective	• Check audio control head Check control output
	• Kein Ton Ton leise Starke Tonausgabeschwankung unregelmässige Tonausgabe Tonverzerrung	• Fehler im Ton-/Kontrollkopf	• Ton-/Kontrollkopf überprüfen Kontrollausgang überprüfen
		• Tape transport adjustment	• Perform tape transport adjustment again after confirming tape transport condition.
		• Bandantriebseinstellung	• Bandantrieb nach Feststellung des Bandantriebszustands überprüfen
	• Audio noise Others : Audio is defective	• Hi-fi head (drum) is defective (circuit is defective)	• Check drum. Check whether B+14V is supplied
	• Rauschen Andere: fehlerhafte Tonausgabe	• Fehler im Hi-fi-Kopf (Trommel) (Schaltkreisfehler)	• Trommel überprüfen. Überprüfen, ob B+14V gespeist werden.

Wird bei den oben beschriebenen Abläufen ein Fehler in der Mechanik festgestellt, muß folgendermaßen vorgegangen werden:
- Demontage, mechanische Phasenverschiebung: reparieren
- Teilefehler, Teileschaden: Teile auswechseln

Sollte die Mechanik keine Fehler aufweisen, Schaltkreise überprüfen.

If the mechanism is found out to be defective according to the procedures described above, perform the following :
- Disassembly, mechanical phase mismatch : repair correctly
- Part defect, part damage : replace parts

If the mechanisml is found not to be defective, check the circuits.

Abbreviation list :

FF	Fast Forward
FG	Frequency Generator
REV/FF	Review
REW	Rewind
SU	Supply
TU	Take-up
UN-LO	Unload

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